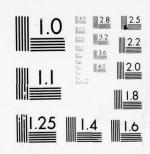


ADAOEI777



MICROCOPY RESOLUTION TEST CHART



AD A 051777

SHIP SYSTEMS DEFINITION AND INDEX (SWBS STAGING DIAGRAMS)
FOR DDG-2 CLASS SHIPS

November 1976

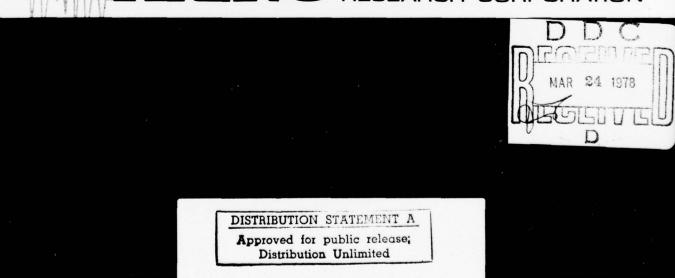
Prepared for PERA(CRUDES)

PHILADELPHIA NAVAL SHIPYARD Philadelphia, Pennsylvania

Under Contract N00140-74-D-0090 Delivery Order 0017



ARINC RESEARCH CORPORATION



	UNCERASSINGUE	
	SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)	
	DEPORT POCHUENTATION PACE	READ INSTRUCTIONS
	REPORT DOCUMENTATION PAGE	BEFORE COMPLETING FORM
	1. PE ORT NUMBER 2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
	1237-01-1-1472	
1		(9)
In	SHIP SYSTEMS DEFINITION AND INDEX (SWBS STAGING	TYPE OF REPORT & PERIOD COVERED
W	DIAGRAMS) FOR DDG-2 CLASS SHIPS	T 1 1/ 1 1/ 1
_	DIAGRAMS) FOR DDG-2 CLASS SHITS	lechaloub repty
		S. PERFORMING ORG. REPORT HUMBER
		1237-01-1-1472
	7. AUTHOR(a)	8. CONTRACT OR GRANT NUMBER(#)
	Nom I TOMED	
	NOT LISTED	NØØ14Ø-74-D-ØØ9Ø
		MARTAN LANGUAGE
	9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
	ARINC Research Corp:	
	2551 Riva Road	
*	Annapolis, Maryland 21401	
	11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE
	PERA (CRUDES) PHILADELPHIA NAVAL SHIPYARD ·	Nov
		13. NUMBER OF PAGES
	Philadelphia, Pennsylvania	135 12 12 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13
	14. MONITORING AGENCY NAME & ADDRESS(II different from Controlling Office)	15. SECURITY CLASS. (of this report)
	PERA (CRUDES) PHILADELPHIS NAVAL SHIPYARD	
	Philadelphia, Pennsylvania	UNCLASSIFIED
		154. DECLASSIFICATION/DOWNGRADING SCHEDULE
		SCHEDULE
	16. DISTRIBUTION STATEMENT (of this Report)	
	INGLACCIETED /INLIMITATION	
	UNCLASSIFIED/UNLIMITED	
	17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from	n Report)
	18. SUPPLEMENTARY NOTES	
	16. SUPPLEMENTARY NOTES	
,		
	나는 아름다면 얼마나 하나 되었다면 맛이 있다면 가는 것이 없는데 없다.	
	19. KEY WORDS (Continue on reverse aide if necessary and identify by block number)	
	하다가 느라면 하다 내가 되는 아들은 아이들이 얼마를 받는데 그리고 있다.	
	[HE NEW PROPERTY FOR THE P	
	20. ABSTRACT (Continue on reverse side if necessary and identify by block number)	

DD 1 JAN 73 1473

EDITION OF 1 NOV 63 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (#Tren Date Enter

400 247

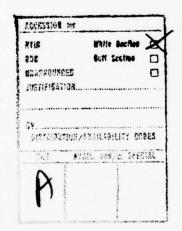
4

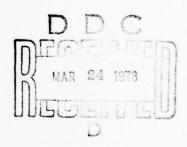
SHIP SYSTEM DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR DDG-2 CLASS SHIPS

November 1976

Prepared for
PERA(CRUDES)
PHILADELPHIA NAVAL SHIPYARD
Philadelphia, Pennsylvania

Under Contract N00140-74-D-0090 Delivery Order 0017





ARING RESEARCH CORPORATION

CORPORATE HEADQUARTERS 2551 Riva Road Annapolis, MD 21401

HONOLULU SUPPORT OFFICE 245 Fort Street, Suite 211 Honolulu, HI 96801

Publication 1237-01-1-1472

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

Copyright © 1976 ARINC Research Corporation

Prepared under Contract N00140-74-D-0090, which grants to the U.S. Government a license to use any material in this publication for government purposes.

SHIP SYSTEM DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR DDG-2 CLASS SHIPS

November 1976

PERA(CRUDES)
PHILADELPHIA NAVAL SHIPYARD
Philadelphia, Pennsylvania



SHIP SYSTEM DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR DDG-2 CLASS SHIPS

November 1976

PERA(CRUDES)
PHILADELPHIA NAVAL SHIPYARD
Philadelphia, Pennsylvania

Preceding Page BLank - FILMED

ABBREVIATIONS

ASROC - Anti-submarine rocket

ASW - Anti-submarine warfare

CDC - Component Dictionary Code

COSAL - Coordinated Shipboard Allowance List

CPO - Chief petty officer

CSMP - Current Ship's Maintenance Project

DART - Detection, Action, Response Technique

EIC - Equipment identification code

EOSS - Equipment Operational Sequencing System

FMP - Fleet Modernization Program

MDCS - Maintenance Data Collection System

NAVELEX - Naval Electronics Systems Command

NAVSEA - Naval Sea Systems Command

NAVSEC - Naval Ships Engineering Center

NAVSUP - Naval Supply System Command

PERA - Planning and Engineering for Repairs and Alterations

PMS - Planned Maintenance System

POT&I - Preoverhaul Test and Inspection

SECAS - Ship Equipment Configuration Accounting System

SSDI - Ship Systems Definition and Index

SWBS - Ship Work Breakdown Structure

SYSCOM - Systems command

TYCOM - Type commander

CONTENTS

ABI	BREV	ATIONS	s					•														iii
1.	INTR	ODUCT	ION.																			1
2.	PRO	PERTIE	S OF	SSI	OI																	3
3.	USES	OF SS	DI .				•															9
	3.1	SSDI S	uppor	t to	Sh	ip's	s F	orc	e													9
		3.1.1																				9
		3.1.2	Ope	rati	on																	10
		3.1.3	Trai	nin	g.		•	•	•	•	•	•	•	•	•	•	•	•	•		•	10
	3.2	SSDI S	uppor	t to	Ot	her	Na	ava	1 A	cti	viti	es										11
		3, 2, 1	PER	As	Shi	nve	ard	s/I	ndu	etr	rial	Ac	tix	itie	2							11
		3.2.2																			•	11
		3.2.3	Tecl	nnic	al S	Sys	ten	is (Cor	nm	and	ls (NA	VSI	EA,	N	ΑV	EL	EX	,	•	11
			NA V	SUI	P)																	11
		3.2.4	Туре	e Co	mr	nan	de	rs	(TY	CC	Ms	5).										12
		3.2.5	Nava	al Sl	hips	E	ngi	nee	rin	g (Cen	ter	(N	AV	SE	C)						12
		3.2.6																				12
4.	SSDI	FOR DI	OG-2	CL	ASS	SI	ПP	s.														13
	4.1	SSDI Ir	dex.																			13
	4.2	Genera	al Cor	nme	ents	3.	•	•		•	•		•	•	•		•	•				14
APT	PENDI	X A. C	OMP	ONE	TNE	r D	ICT	rio	NA	RY	CC	ODE	: T.	IST	,							A - 1

INTRODUCTION

The Ship Systems Definition and Index (SSDI) is an orderly identification and structuring of the systems and subsystems that make up a ship. In defining ship systems as well as their boundaries and interfaces, the SSDI creates a common language for communicating information about ship configurations. The SSDI is thus useful to all Navy activities involved in the life-cycle operation, maintenance, modernization, and support of ships.

This report discusses the general properties of SSDIs (Section 2), and the many ways SSDIs can be utilized by the various Navy activities (Section 3); and presents the SSDIs developed for the DDG-2 ship class (Section 4).

The hierarchical concept on which the Ship Systems Definition and Index is based is illustrated in Figure 1. As can be seen, the SSDI is structured such that the summation of SSDI items at any level defines the total ship. An actual application of Figure 1, showing a typical ship breakdown from the major system to the subsubsystem level, is shown in Figure 2.

As illustrated by Figures 1 and 2, the SSDI is structured to:

- a. Provide a multi-level breakdown of a ship's configuration.
- b. Completely define the ship at each level.
- c. Contain no redundancies in its definition of the ship.
- d. Utilize the Ship Work Breakdown Structure (SWBS). This provides a standard language based on the same nomenclature and three-level coding system mandatory for use on a Navywide basis.
- e. Utilize a standard Navy Component Dictionary Code list (see Appendix A) for assigning fifth-level identification codes. The last two characters of the identifier are from this list, e.g., 2551M7.
- f. Tailor the SWBS to the configuration of a specific ship class.

 The ship class diagrams can in turn be tailored to the configuration of individual ships within the class.

Figure 3 extends a portion of Figure 2 to an additional level of detail to demonstrate the information provided in the SSDI. As shown, the following are identified:

- a. System equipments
- b. System boundaries
- c. Shipboard maintenance work centers

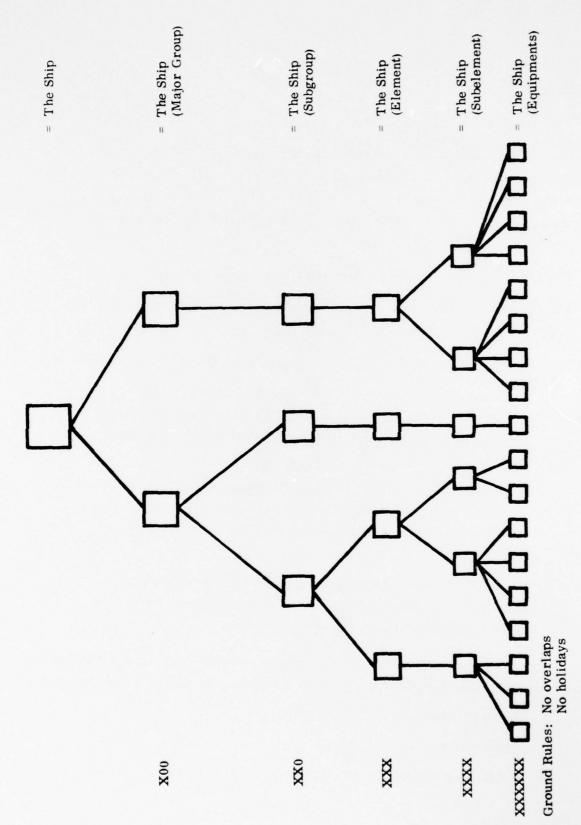


Figure 1. SSDI Concept

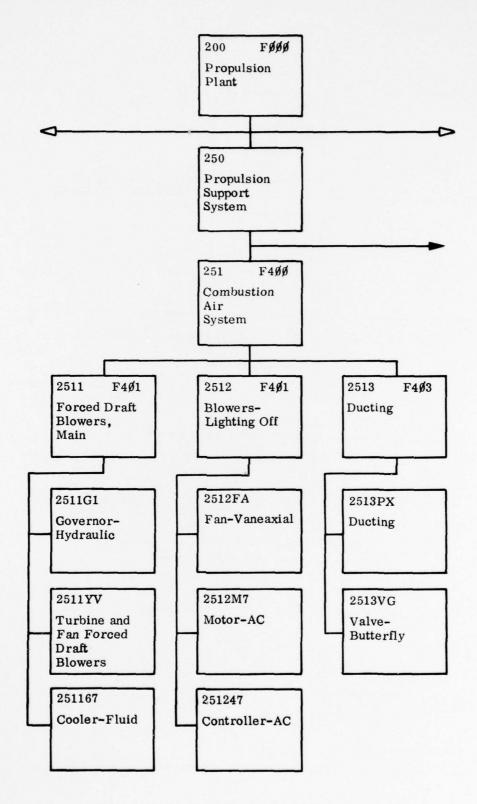


Figure 2. Portion of a Typical Ship's System

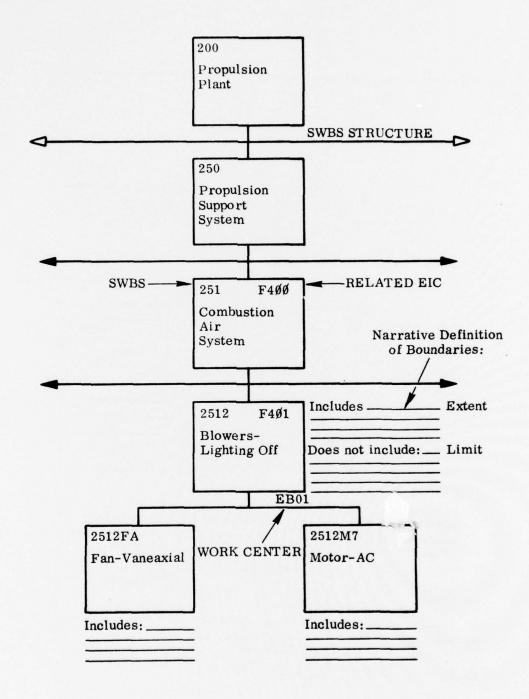


Figure 3. Example of System Diagrams Included in SSDI

In some cases, notably for the more complicated systems, the SSDI provides still further information in the form of line diagrams that:

- a. Show the major hardware items within the system boundaries and their interrelationships.
- b. Depict graphically the verbal descriptions given on system diagrams for selected SWBS-coded items. Those systems which are complex and interface with other complex systems are diagrammed as Figure 4 indicates.

In a line diagram, solid lines with the system boundary denote equipments or components which are part of that particular system. Dashed lines show interfaces between those equipments/components and elements of other systems (see Figure 4).

Although some line diagrams show functional relationships, that is not their intent. Their specific purpose is to aid in the identification of ship systems. For that reason the schematics are greatly simplified from the actual configuration. For example, although there may be two or more identical forced-draft blowers used in a condensate system, only one is shown on the schematic (see Figure 4). This is because all blowers of the same type are part of the same system.

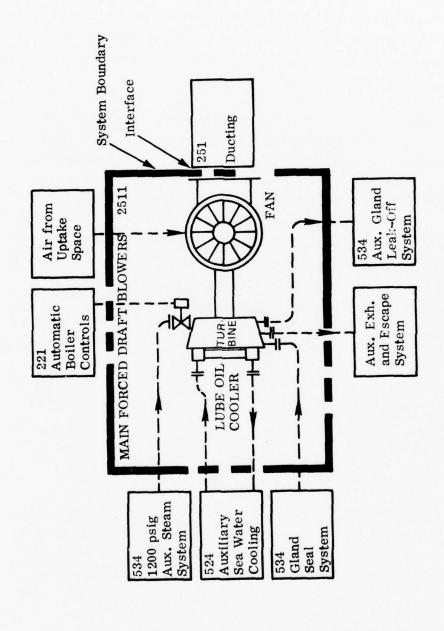


Figure 4. Example of Line Diagrams Included in SSDI

Throughout a ship's life, ship's force personnel submit a vast amount of system, equipment, and parts information to their type commander and fleet support activities. Requests for alteration, reports of maintenance action, work requests, and parts requisitions are but a few examples. In each instance the submitted information must be related to a specific, definable portion of the ship.

In carrying out their responsibilities, the type commander and the support activities (PERAs, shipyards, etc.) must not only identify a specific item within the total ship, but also be aware of its interfaces. In planning alterations or modifications, for example, one must be able to identify the various systems that will be affected by a particular change to a ship's configuration. Also, when preparing for overhaul or other availabilities, the type commander, PERA, and repair activities must be able to organize a work package on the basis of specific as well as interrelated ship systems. This is done to ensure that the work package is completely and effectively defined.

Since so many activities are involved in supporting the ship, it is necessary that both ship and support personnel use a single, uniform language when communicating configuration information. The Ship Systems Definition and Index provides this common language by describing a specific ship in terms common to all ships of the fleet. Potential uses of the SSDI are outlined below.

3.1 SSDI SUPPORT TO SHIP'S FORCE

3.1.1 Maintenance

- a. Serves as a checklist for planning and conducting inspections.
- b. Provides the basis for comparing repair items with alterations.
- c. Aids in establishing repair priorities.
- d. Assists in identifying shipyard, ship's force, and tender interfaces.

- e. Assists in making manpower assignments by ensuring that all systems of the ship are considered.
- f. Aids ship's force in "buttoning up" all systems for post-repair testing.
- g. Aids in alteration planning and analysis by showing possible interfaces in terms of various ship systems.
- h. Aids in standardizing shipboard validation procedures.
- i. Provides a means for identifying deficiencies in shipboard documentation such as the Coordinated Shipboard Allowance List (COSAL), Planned Maintenance System (PMS), etc.
- j. Assists in identifying related Equipment Identification Codes (EIC) necessary for CSMP and Maintenance Data Collection System (MDCS) inputs.
- k. Provides a standard language for maintenance documentation.
- 1. Provides a common set of system descriptions for the development of maintenance instructions (PMS) and operating instructions (Equipment Operational Sequencing System, EOSS).

3.1.2 Operation

- a. Serves as a checklist for determining the completeness of EOSS coverage.
- b. Provides a means of identifying the interrelationships among operating systems.
- c. Identifies the boundaries for system testing.
- d. Provides a means of determining test equipment and support requirements.

3.1.3 Training

a. Provides a disciplined method for displaying a ship's configuration, thereby identifying training requirements from the equipment through the system level.

b. Supports training shipboard operation/maintenance personnel in ship systems and system interfaces.

3.2 SSDI SUPPORT TO OTHER NAVAL ACTIVITIES

3.2.1 PERAs/Shipyards/Industrial Activities

- a. Defines ship systems for alteration and repair planning.
- b. Provides a standard indexing language for:
 - Ship Alteration and Repair Package (SARP)
 - Specification preparation
 - Cost estimating and cost progressing
 - Drawing numbering
 - Material identification and ordering
 - POT &I planning and organization
 - Management information systems
- c. Assists in determining priorities of work by displaying the affected equipment in relation to its system.

3.2.2 Ship Equipment Configuration Accounting System (SECAS)

- a. Provides a standard structure for total shipboard validation.
- b. Provides information for determining the desired level of validation.

3.2.3 Technical Systems Commands (NAVSEA, NAVELEX, NAVSUP)

- a. Aids in determining the SWBS identification of alterations for inclusion in shipalt records and subsequently in other Navy data bases.
- b. Identifies ship systems such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the Fleet Modernization Program (FMP).
- c. Provides a means for ensuring that standard failure-data correlation and analysis is performed to the desired level.

3.2.4 Type Commanders (TYCOMs)

- a. Aids in determining work priorities by displaying the affected equipment in relation to its system.
- b. Identifies the system such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the FMP.
- c. Enables the TYCOM to properly identify and budget the system for repairs.

3.2.5 Naval Ships Engineering Center (NAVSEC)

- a. Provides a vehicle for ensuring that standard failure-data correlation and analysis is performed to the desired level.
- b. Defines the systems for design consideration and subsequent corrective measures such as the Detection, Action, Response Technique (DART) program.
- c. Provides information for determining the required level of repair parts support requirements.

3.2.6 Fleet Support Activities

- a. Identifies shipboard systems as an aid in determining personnel and material requirements in response to solving specific ship problems.
- b. Serves as a tool for establishing required support capabilities (people and equipment).

4.1 SSDI INDEX

The SSDI for DDG-2 class ships is presented on the following pages. The diagrams are presented in the order indicated below.

a.	Index Diagrams	Page
	Overall	17
	100 - Hull Structure	18
	200 - Propulsion Plant	19
	300 - Electric Plant	20
	400 - Command and Surveillance	21
	500 - Auxiliary Systems	22
	600 - Outfit and Furnishings	23
	700 - Armament	24
	800 - Integration/Engineering	25
b.	Legend of Symbols	27
c.	SSDIs	
	100 - Hull Structure	31
	200 - Propulsion Plant	43
	300 - Electric Plant	85
	400 - Command and Surveillance	99
	500 - Auxiliary Systems	137
	600 - Outfit and Furnishings	189
	700 - Armament	213
	800 - Integration/Engineering	229

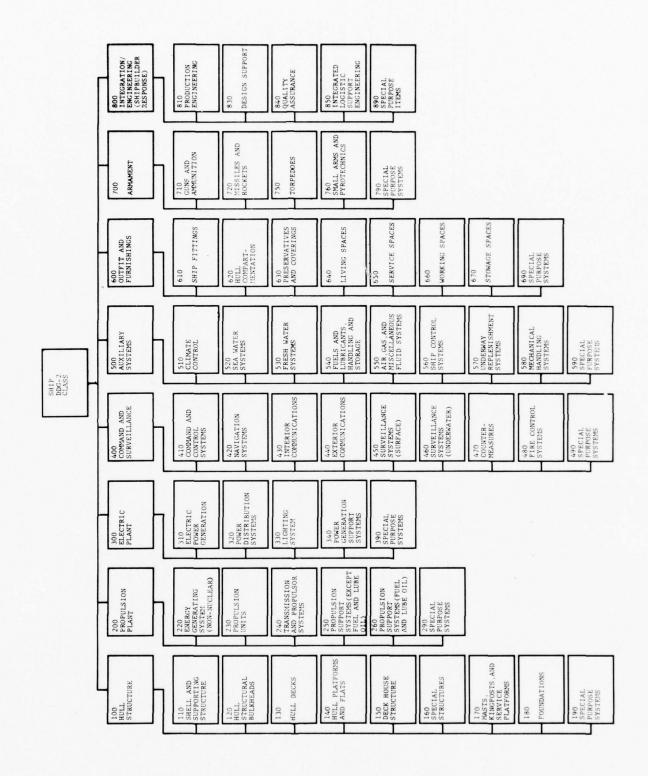
The Legend of Symbols supports the line diagrams that accompany certain of the ship system diagrams.

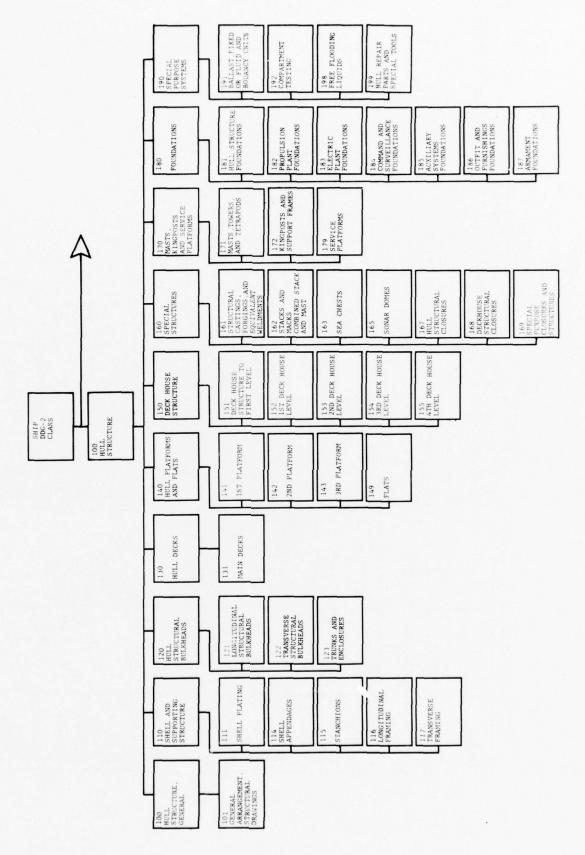
4.2 GENERAL COMMENTS

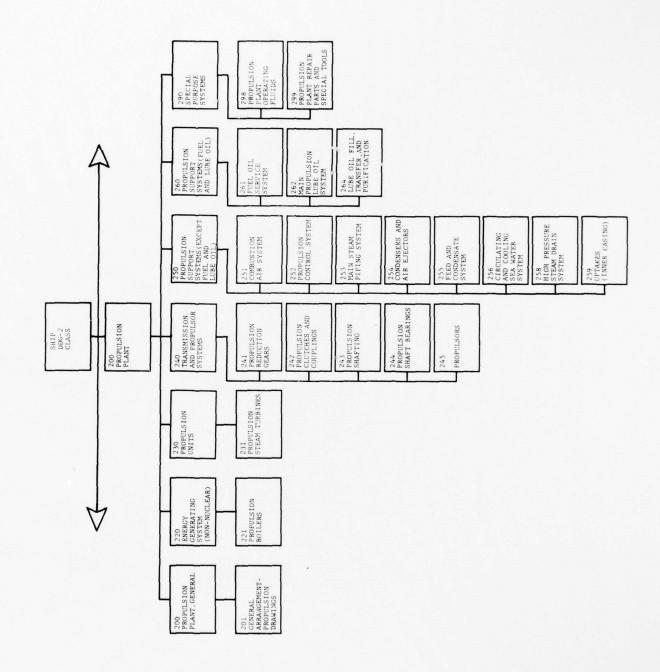
The following general comments apply to the DDG-2 class SSDIs:

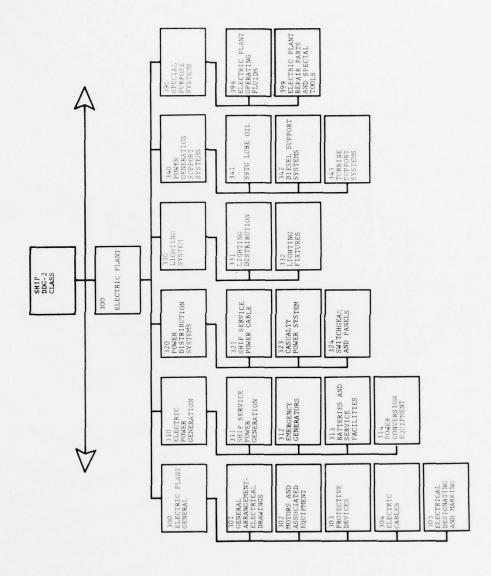
- a. This SSDI is structured to encompass the entire DDG-2 class, i.e., all identified combinations of systems and equipments have been included. Individual ships will not necessarily have all identified components because of such conditions as ship alterations that have/have not been accomplished, variations due to construction differences, etc.
- b. In each WBS group, elements X01 through X09 are used for general requirements, and element X98 for operating liquids. These nonhardware elements are indicated by dashed blocks.
- c. To maintain the principle of having equipments/components at the fifth level, some element titles have been repeated at the fourth and fifth levels and appropriately numbered, e.g., element 115.
- d. The term "With System", or "W.S.", indicates that the item is coded with the system of which it is a part or which it serves.
- e. EIC cross-references are entered only blocks with a direct cross-reference, i.e., same system, subsystem, equipment as an SWBS classification.
- f. Work center assignments are representative. Use of the SSDI for specific ships of the class will require verification of applicable work centers.
- g. Elements where no specific equipments can be identified at this time (e.g., future installations) are shown by double-dashed blocks.

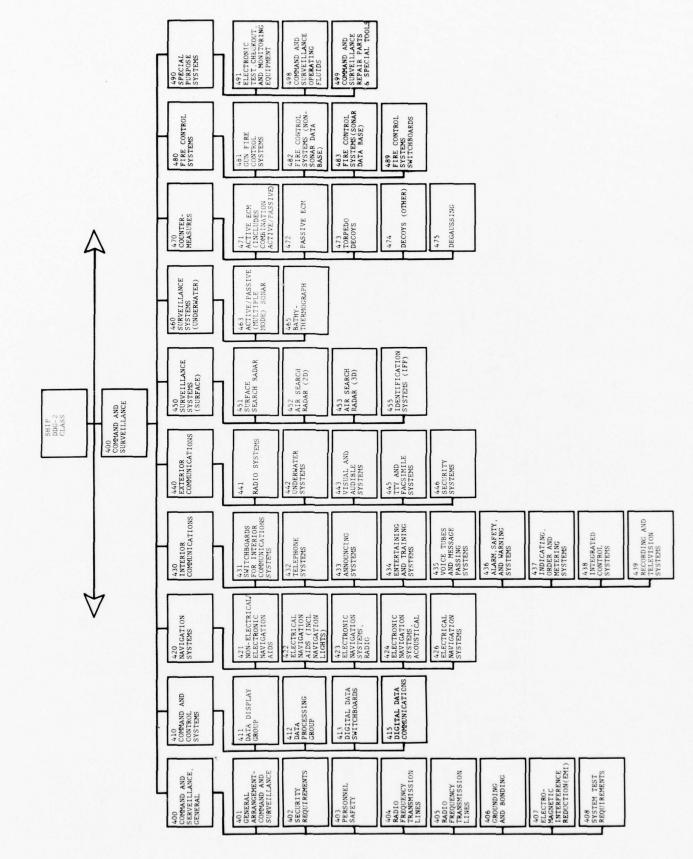
SHIP SYSTEM DEFINITION AND INDEX FOR DDG-2 CLASS SHIPS

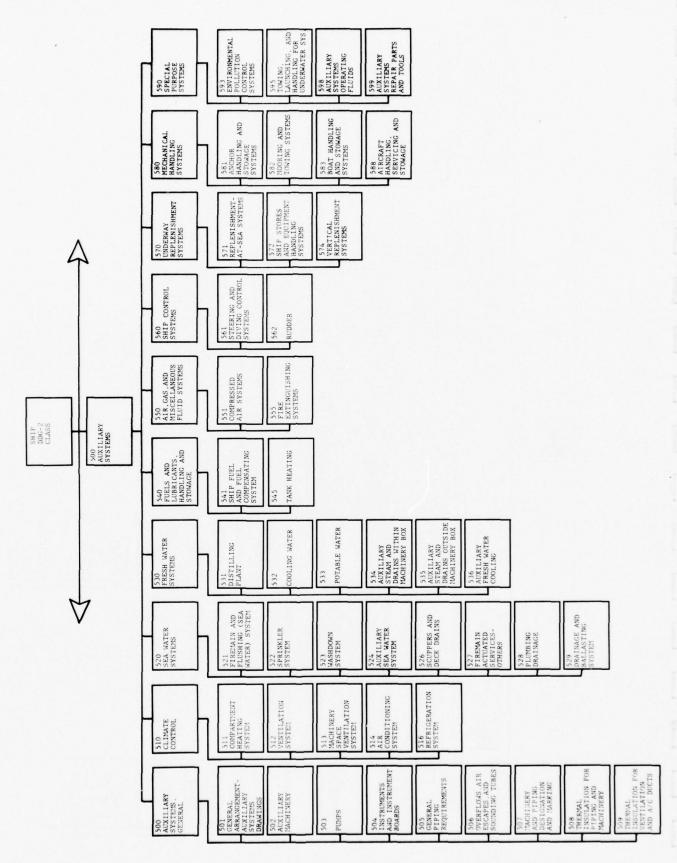


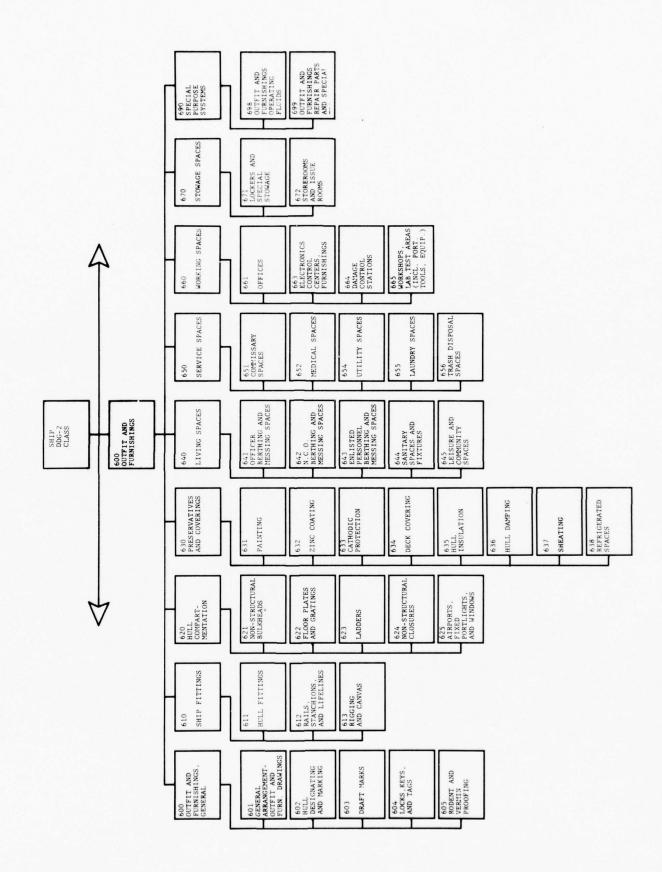


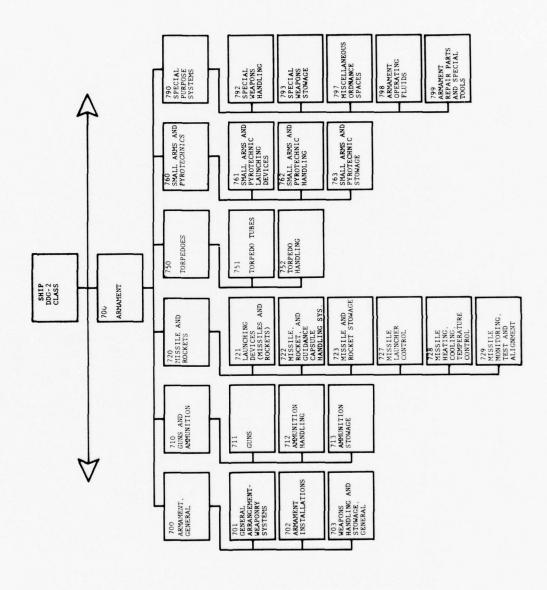


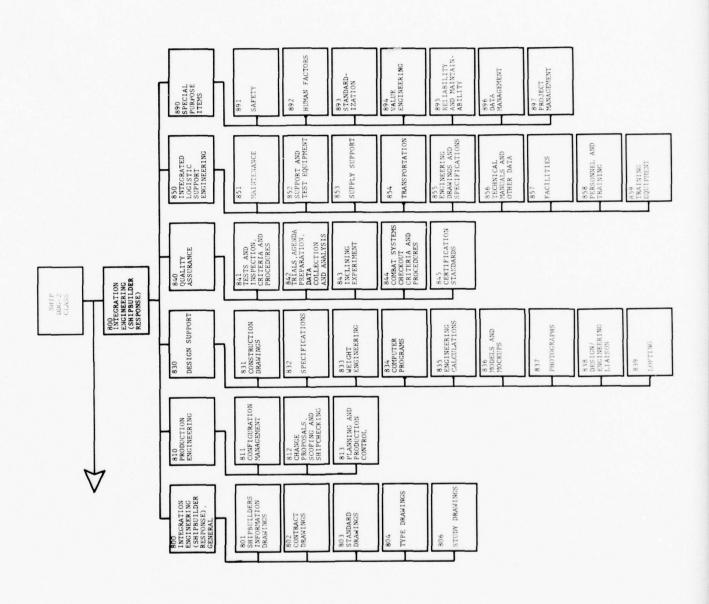










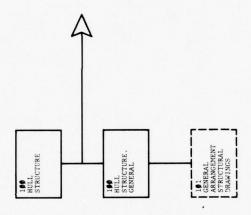


	LEGEND OF SYMBOLS
SYMBOL	DESCRIPTION
\rightarrow	GLOBE VALVE
	GLOBE VALVE, LOCKED OPEN
	GLOBE VALVE, LOCKED CLOSED
-\$-	GLOBE VALVE, MANUALLY OPERATED IN PLACE OR PNEUMATICALLY FROM MAIN DECK
	AIR MOTOR OPERATED VALVE
一块	GLOBE VALVE, WITH MANUAL GEAR OPERATED IN PLACE AND AJACENT SPACE
-₽	GLOBE VALVE, ANGLE
-180-	GLOBE VALVE, REMOTE OPERATED
	GLOBE STOP CHECK VALVE
- 124	GATE VALVE
- 🕸 -	BUTTERFLY VALVE
7	SWING CHECK VALVE
心	LIFT CHECK VALVE
- 🔯	NEEDLE VALVE
ф	STOP COCK PLUG OR CYLINDER VALVE 3 WAY, 2 PORT
	CONTROLLED VALVE, BOILER FEED
泉	PRESSURE REDUCING OR PRESSURE REGULATING INCREASED ACTUATING PRESSURE CLOSES
-S-	PRESSURE REDUCING OR PRESSURE REGULATING DECREASED ACTUATING PRESSURE CLOSES
***************************************	PRESSURE REGULATING VALVE AIR PILOT OPERATED
→	PUMP GOVERNOR
	THERMOSTATICALLY CONTROLLED VALVE
各	DUMP VALVE
-\$-	PILOT VALVE
→ ∑ <u>F</u> 2.	FLOAT OPERATED VALVE
7	ANGLE LIFT CHECK VALVE
₩	CONTROL VALVE
-₩	HOSE CONNECTION AND GLOBE VALVE

NOTE: VALVES OTHER THAN THE GLOBE VALVE MAY USE THE MODIFIERS SHOWN. IN ADDITION COMBINATIONS OF VALVE MODIFIERS MAY BE USED.

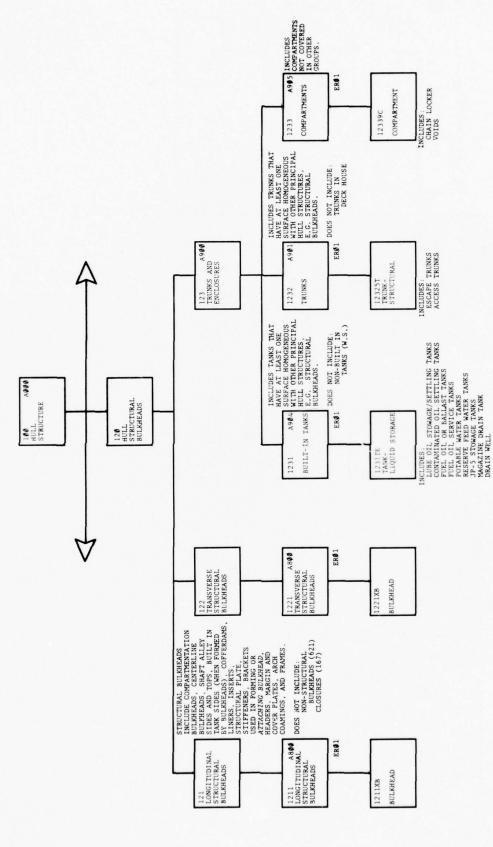
	LEGEND OF SYMBOLS
SYMBOL	DESCRIPTION
\$	VENT
	BOILER DRUM SAFETY VALVE
− \$	ANGLE RELIEF VALVE (ENCLOSED SPRING)
-	COMBINED EXHAUST AND RELIEF VALVE
Q°	PRESSURE GAUGE
Ø ^{VP}	VACUUM - PRESSURE GAUGE
⊗ DX	DUPLEX PRESSURE GAUGE
Ø*	ABSOLUTE PRESSURE GAUGE
*	DISTANT READING PRESSURE GAUGE
Y	DISTANT READING THERMOMETER
<u> </u>	SIGHT READING THERMOMETER
0 -	THERMO ELEMENT
	METER, SIGHT FLOW
⊣¦⊢	PRESSURE BREAKDOWN ORIFICE
†	CPEN FUNNEL
	SPECTACLE FLANGE
8	DUPLEX STRAINER
-2	Y STRAINER
	STRAILIER
-\$	IMPULSE TRAP & STRAINER
	SALINITY CELL
	OPIFICE PLATE
-C -	MOTOR CONTROLLER
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TEST TEE
-	LE SUFERHEATER
-000	MATHFOLD
- - -	EDUCTOP

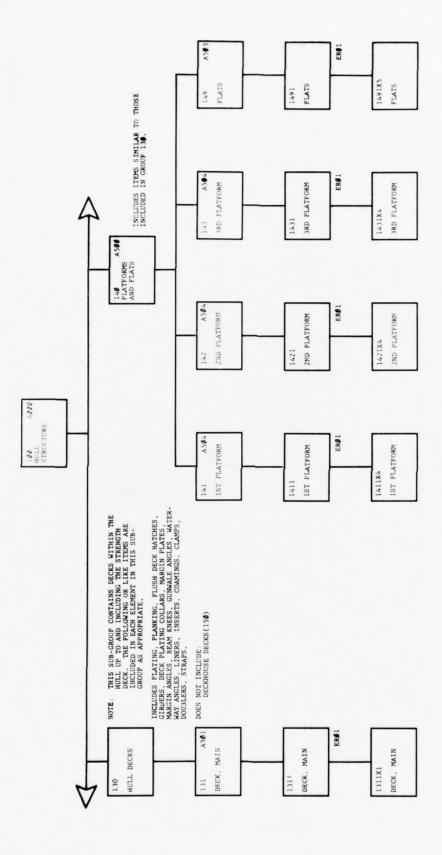
SYMBOL	LEGEND OF SYMBOLS DESCRIPTION
40	PUSHBUTTON & INDICATOR LIGHT
_0	PUSHBUTTON
# 1	EXPANSION JOINT
	GAGE GLASS
-12-	DUPLEX (TWIN BASKET) MAGNETIC STRAINER
φ	THERMOCOUPLE CONNECTION OR THERMOSTAT
甲	THERMOMETER ANY ANGLE DIAL, BARE BULB TYPE DIRECT READING
甲	THERMOMETER DISTANT READING BARE BULB TYPE
	CONSTANT FLOW FITTING
\rightarrow	FUNNEL WITH SWING COVER
>-	CONCENTRIC REDUCER
-D-	REDUCER
中	HOSE ADAPTER
-1-	SOUND ISOLATION FITTING
	FLEXIBLE HOSE
	FLOW MEASURING NOZZLE
-€	SHAFT TURBINE END, COUPLING OIL SPRAY
	ANGLE STOP VALVE
	BALL CHECK STOP VALVE
*	PRESSURE VENT
- ₩-	LOCK SHIELD VALVE, HIGH LIFT
-124-	BOTTOM BLOWDOWN VALVE, HIGH LIFT
Φ	TOP BLOWDOWN VALVE, HIGH LIFT
枣	AIR OPERATED VALVE SPRING CLOSING
\$\frac{1}{2}	AUTOMATIC RECIRCULATING VALVE
-KT-	CROSS VALVE
一	MOTOR PRESSURE SWITCH
- LS	LIMIT SWITCHES

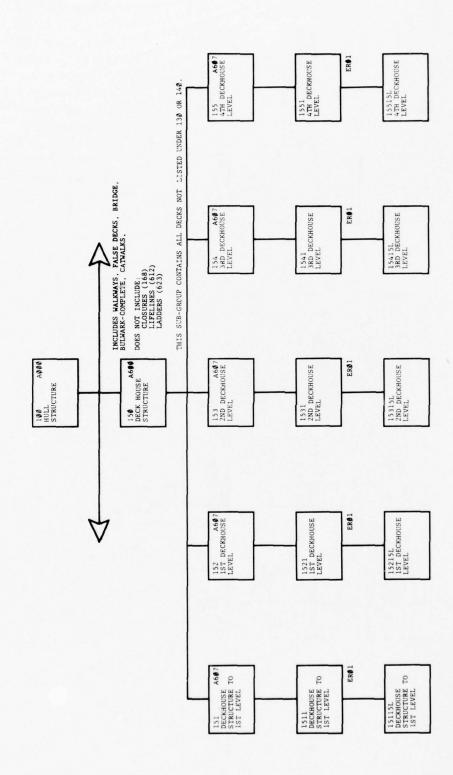


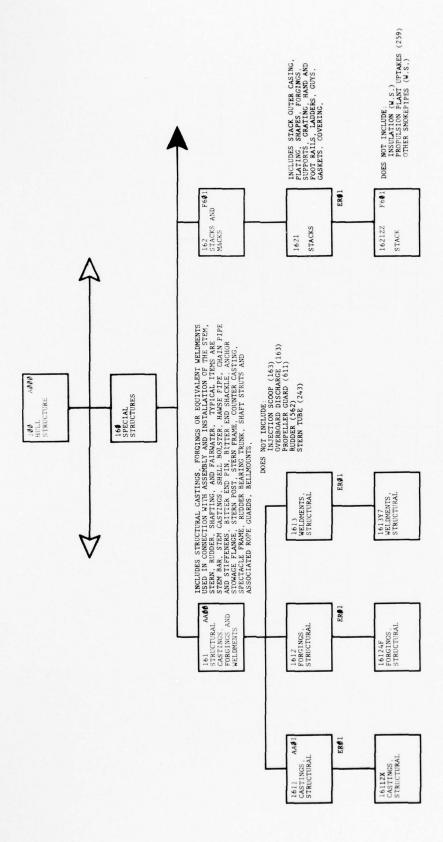
I

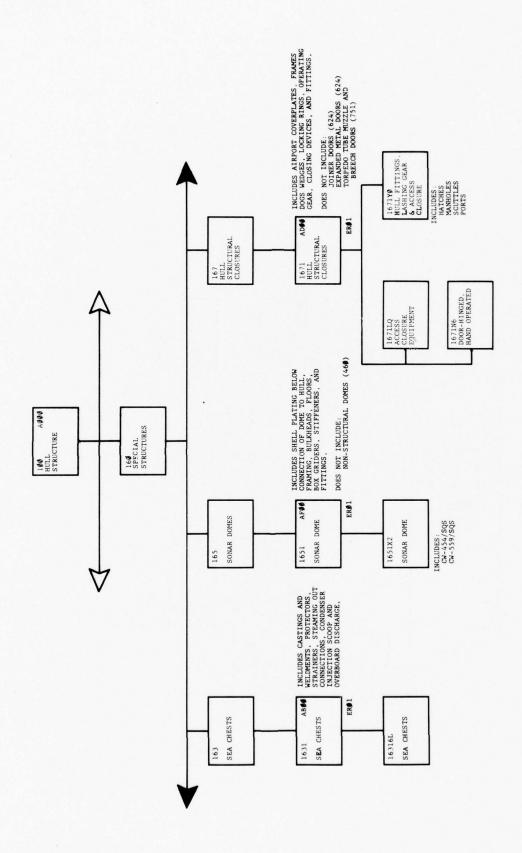
DDG-2 CLASS PREPARED 10-7-76

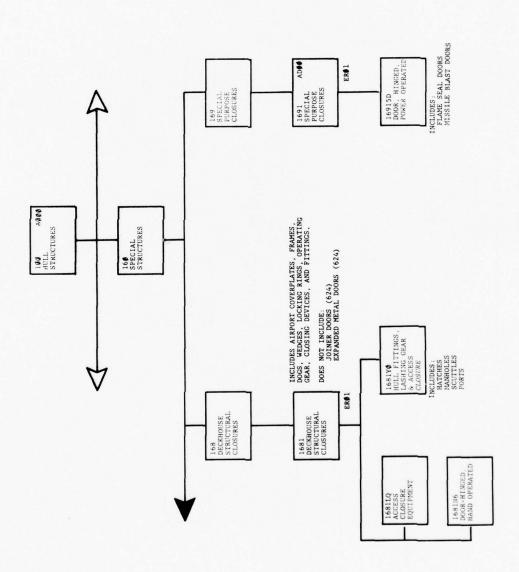


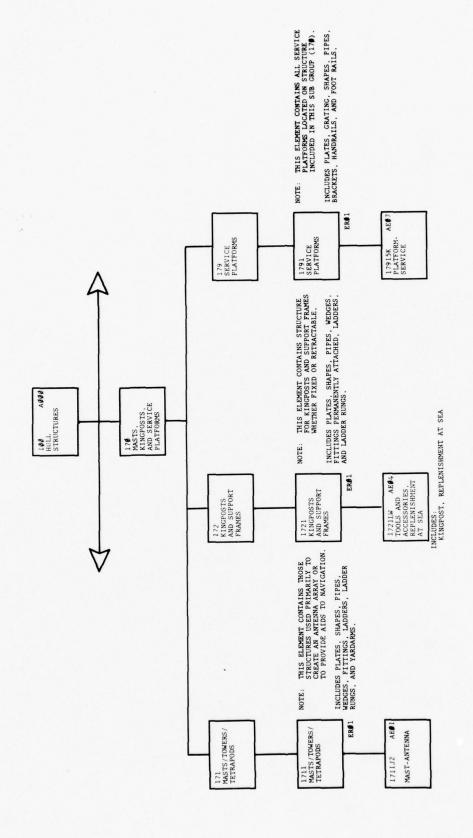


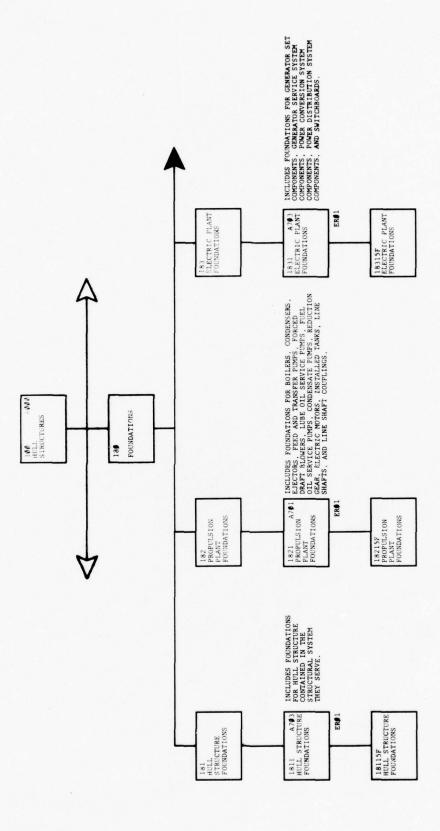


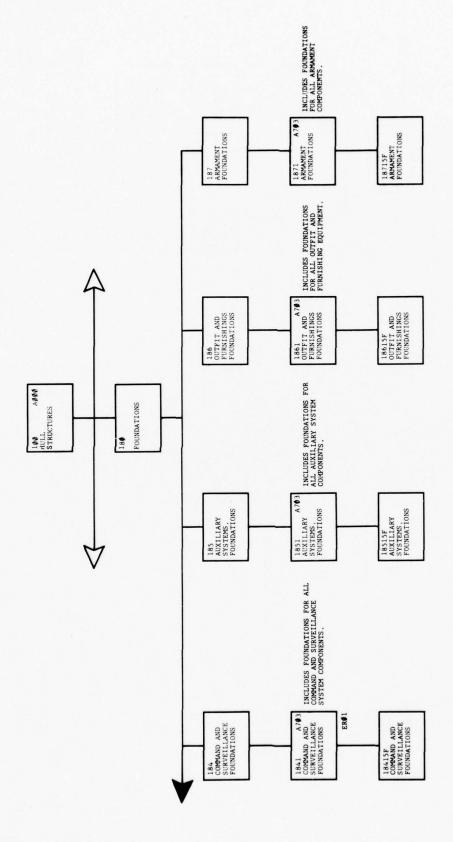


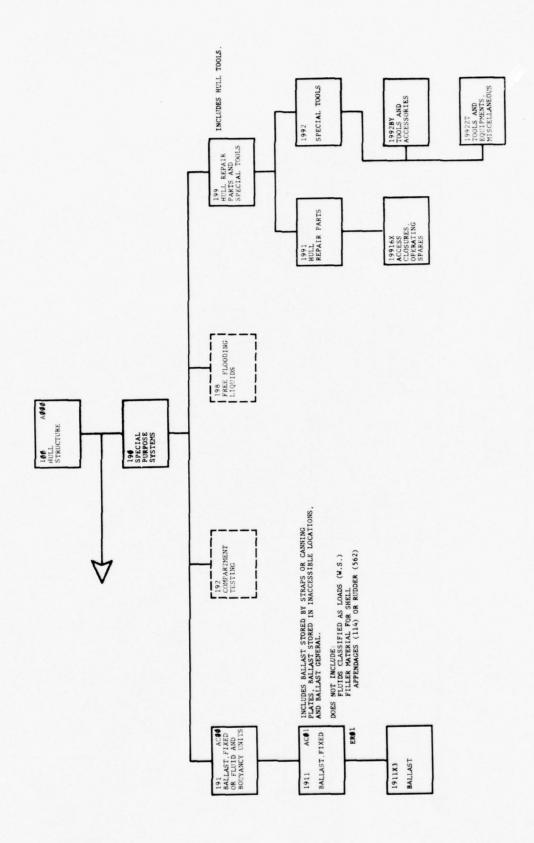


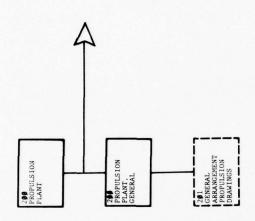


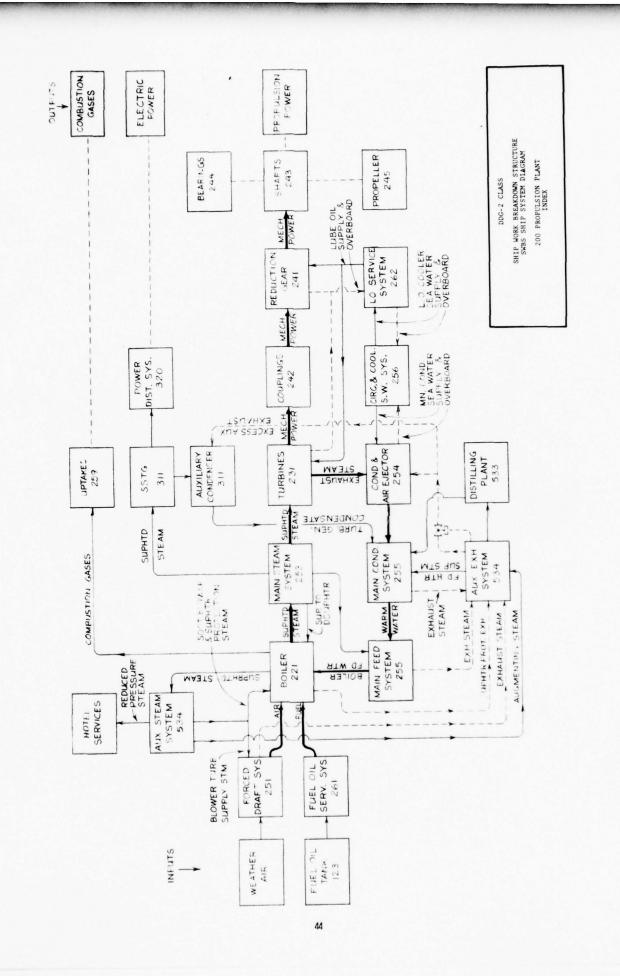


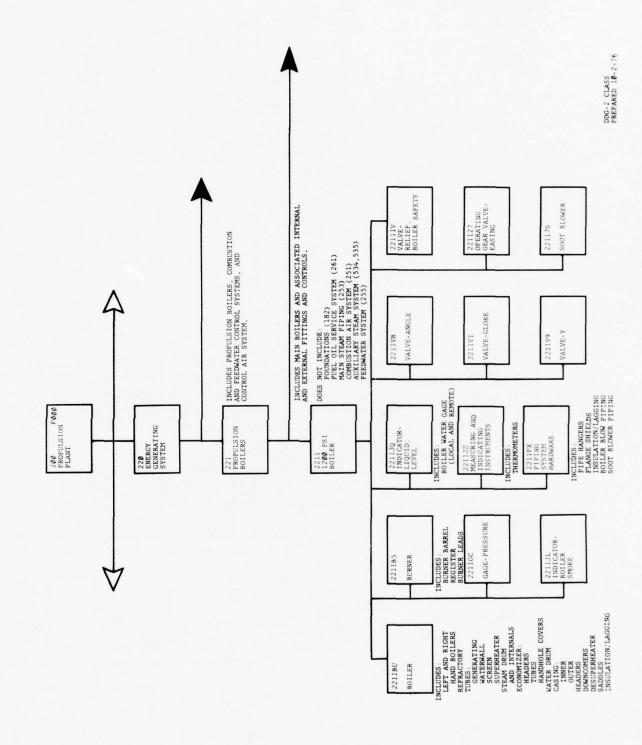


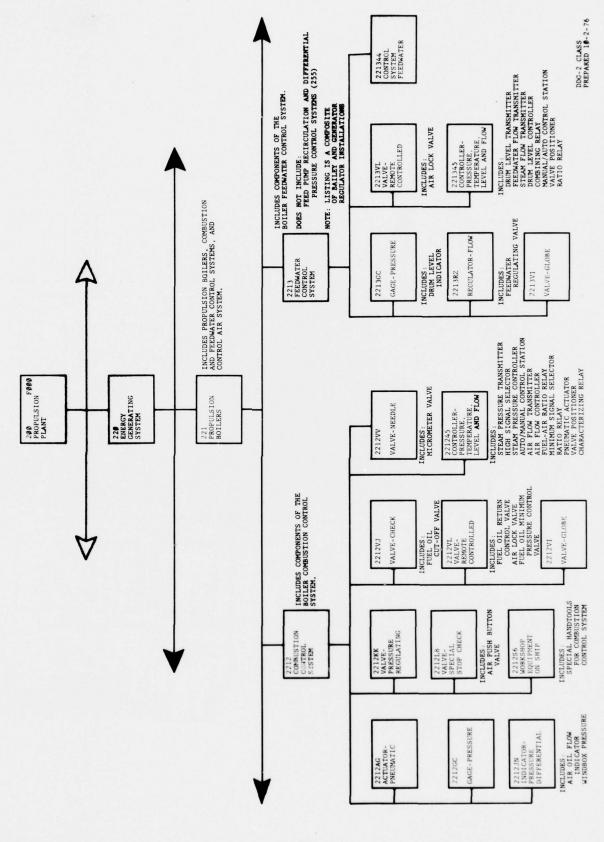


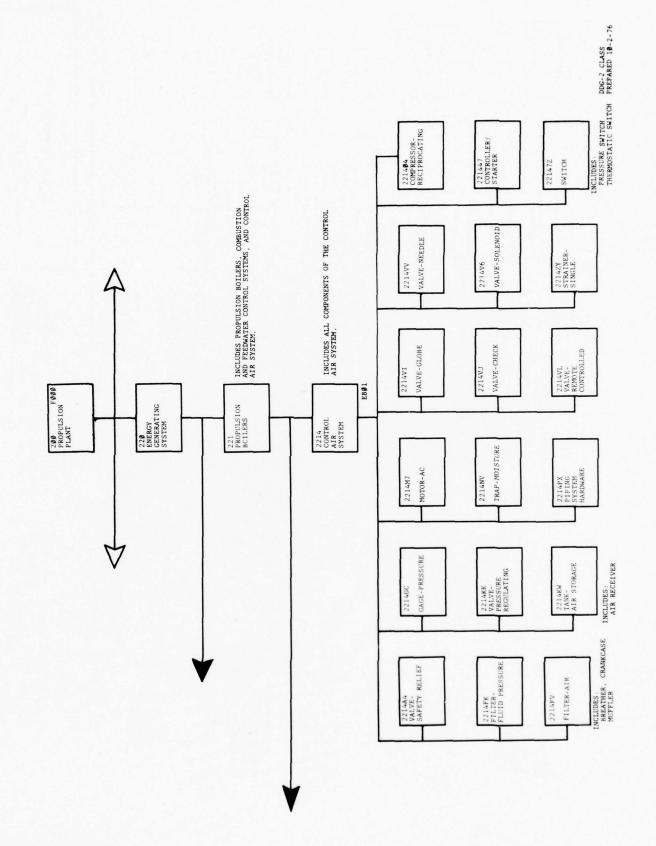


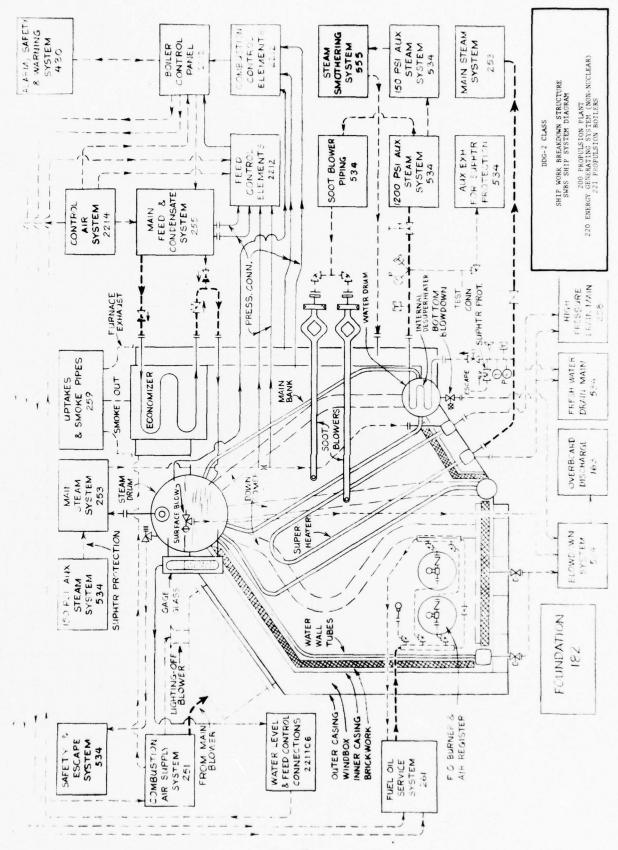




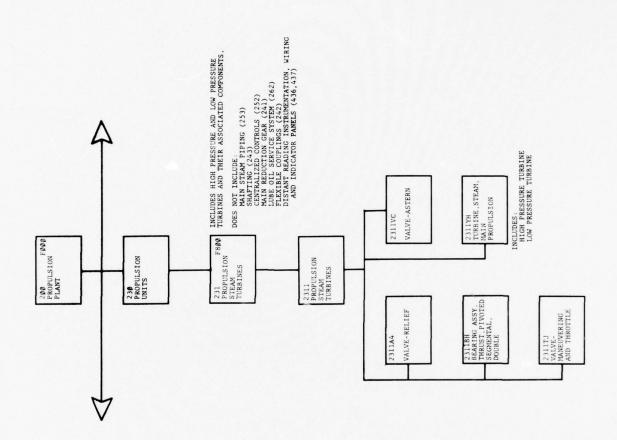


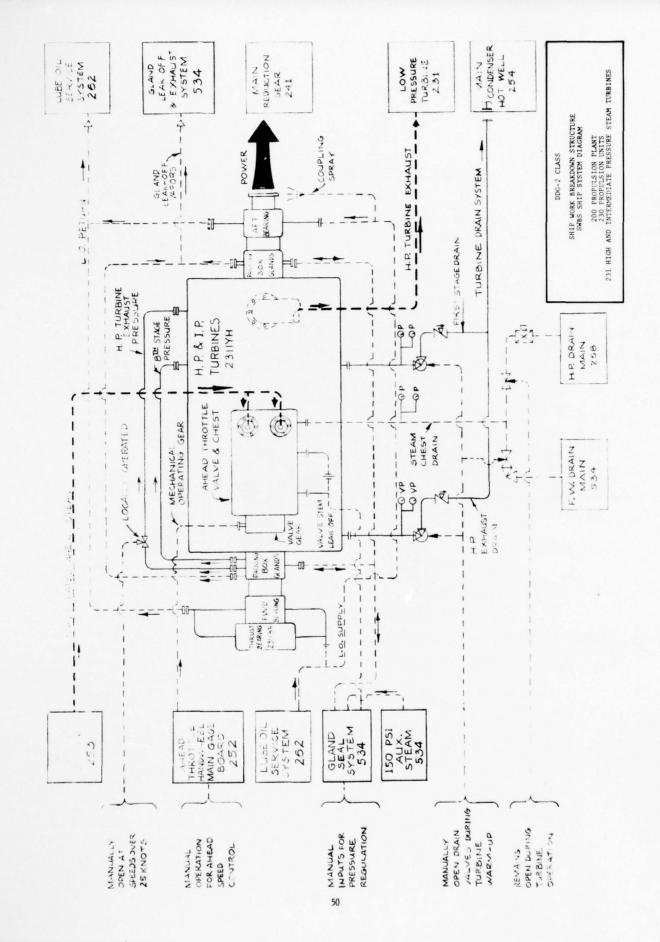


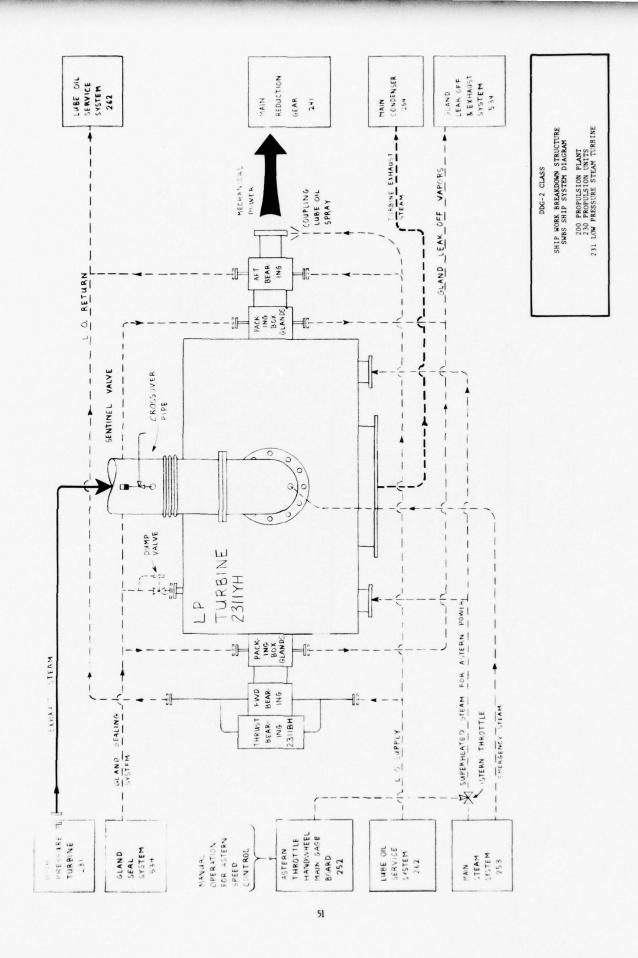


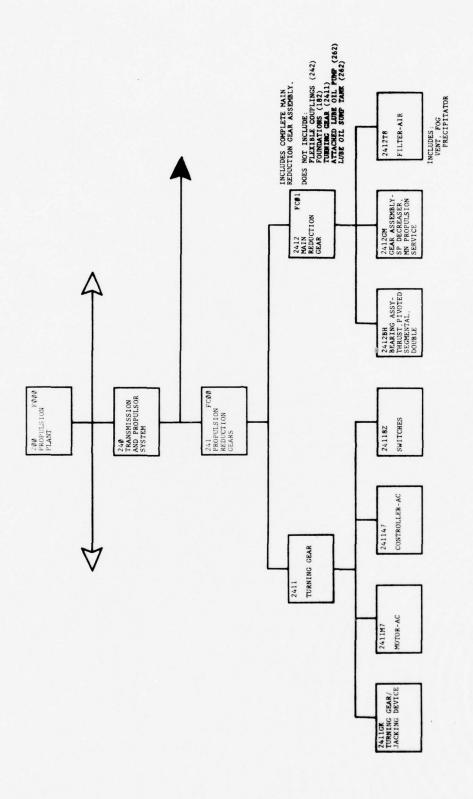


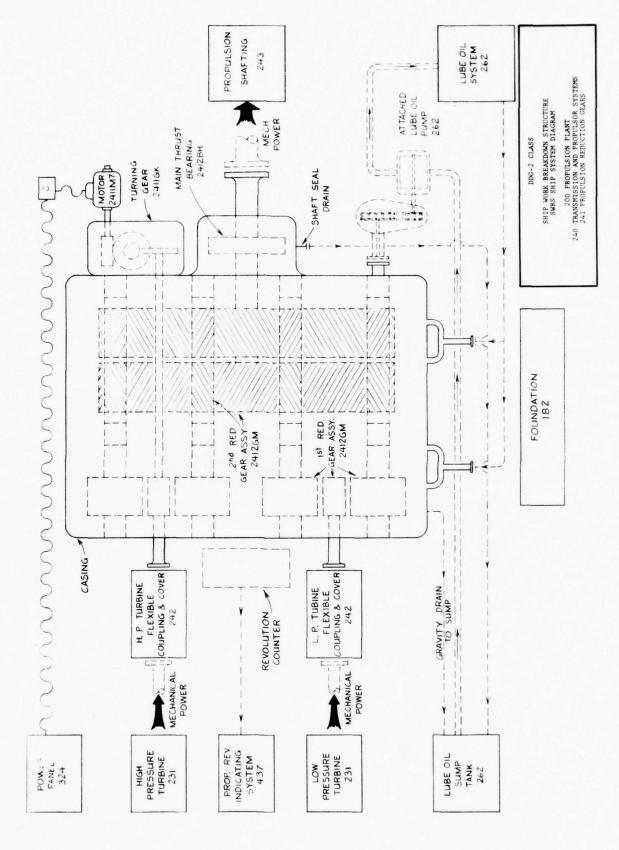
...

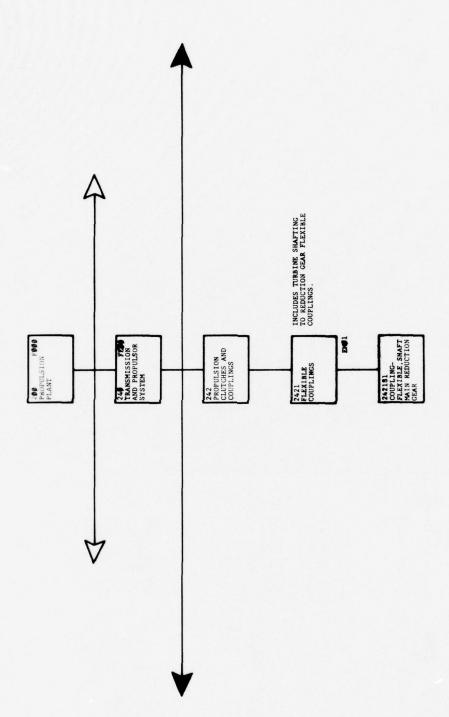


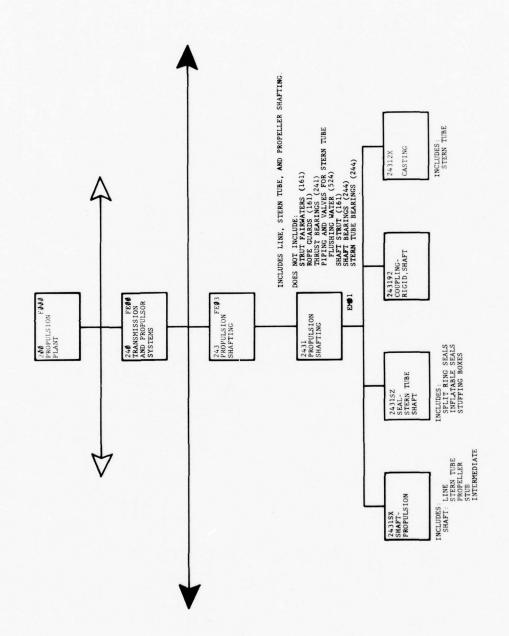


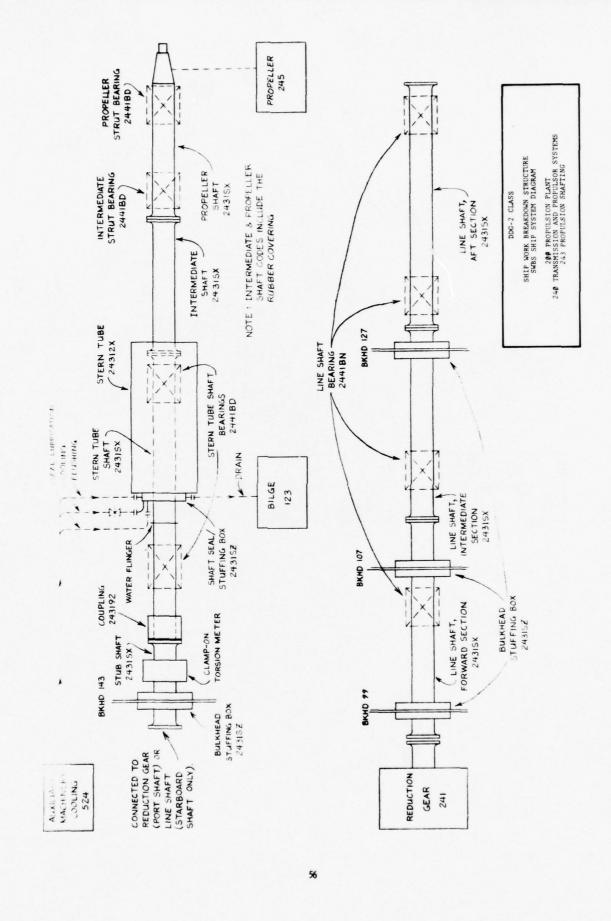


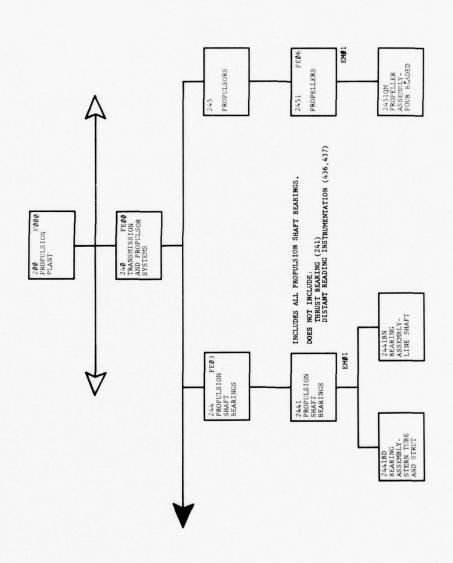


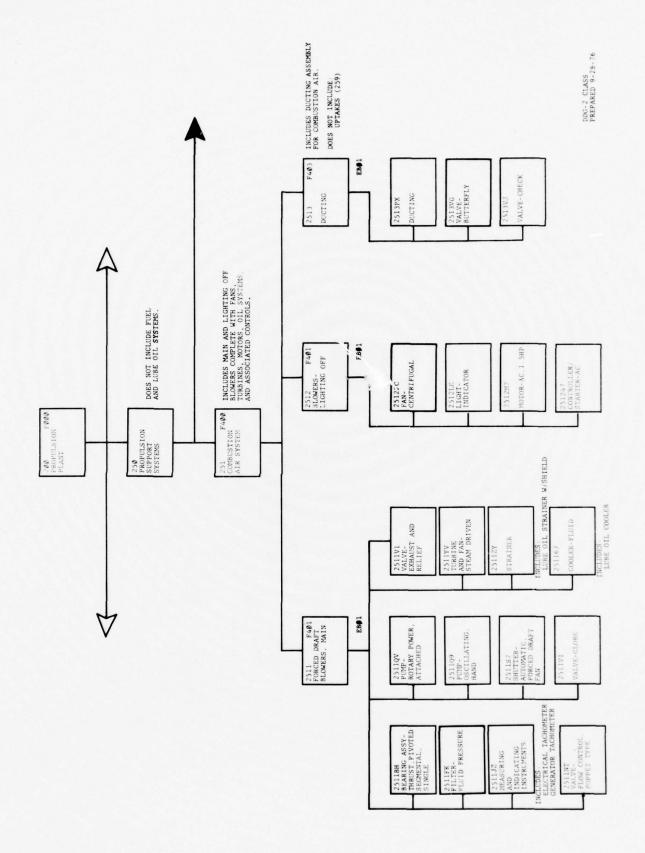


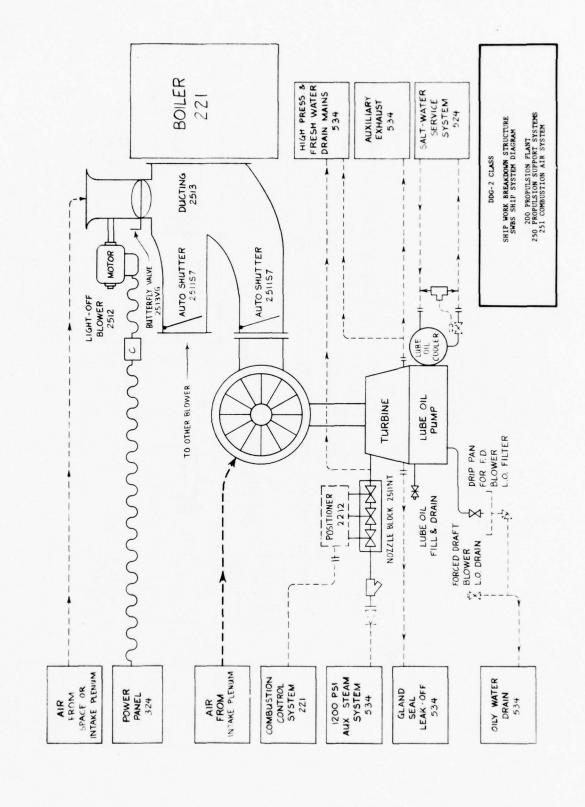


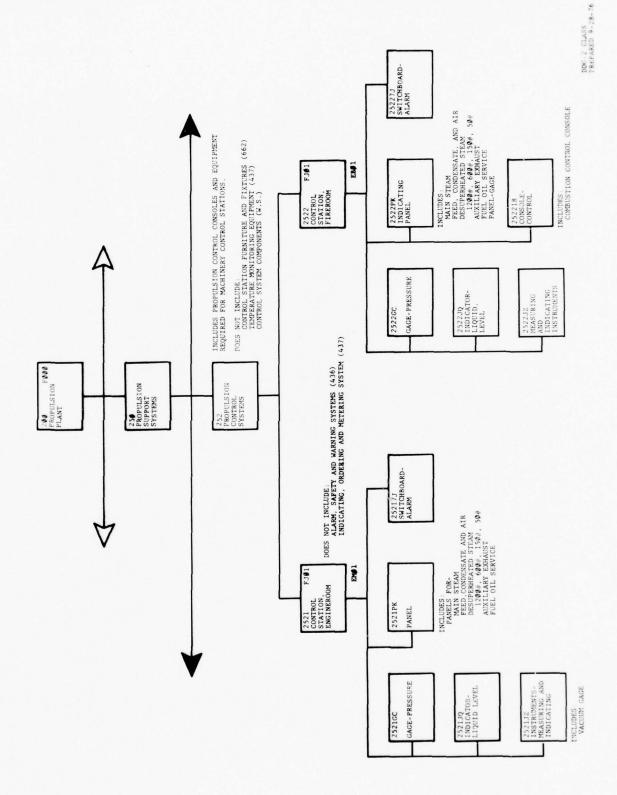


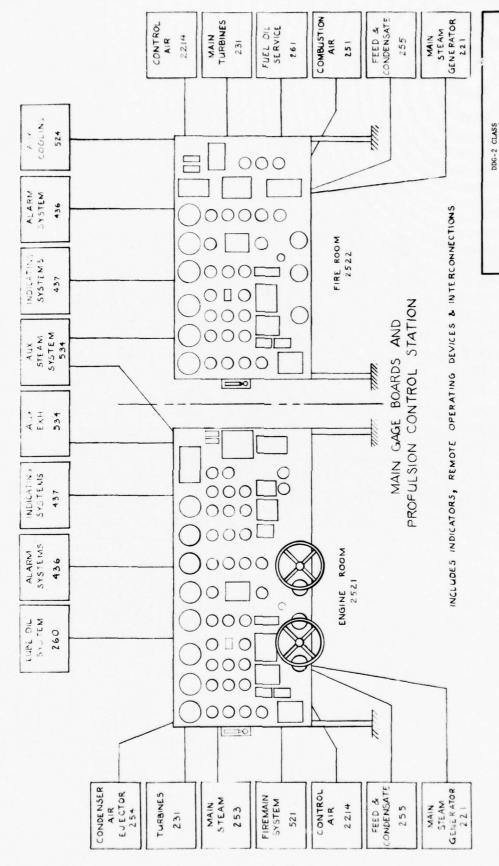




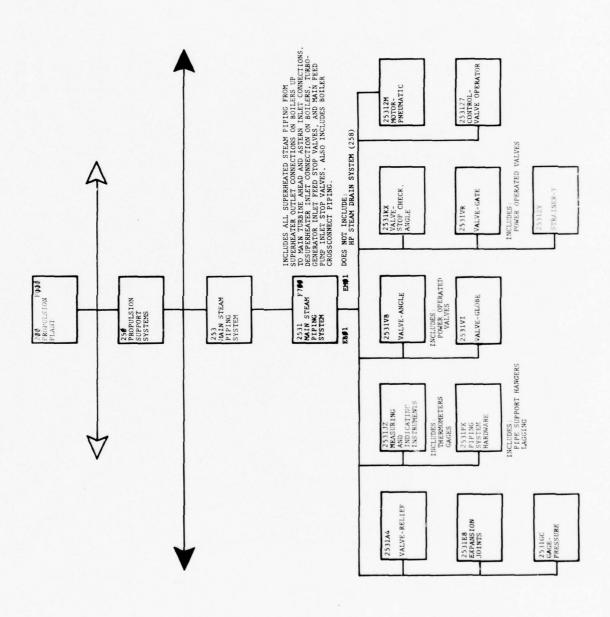


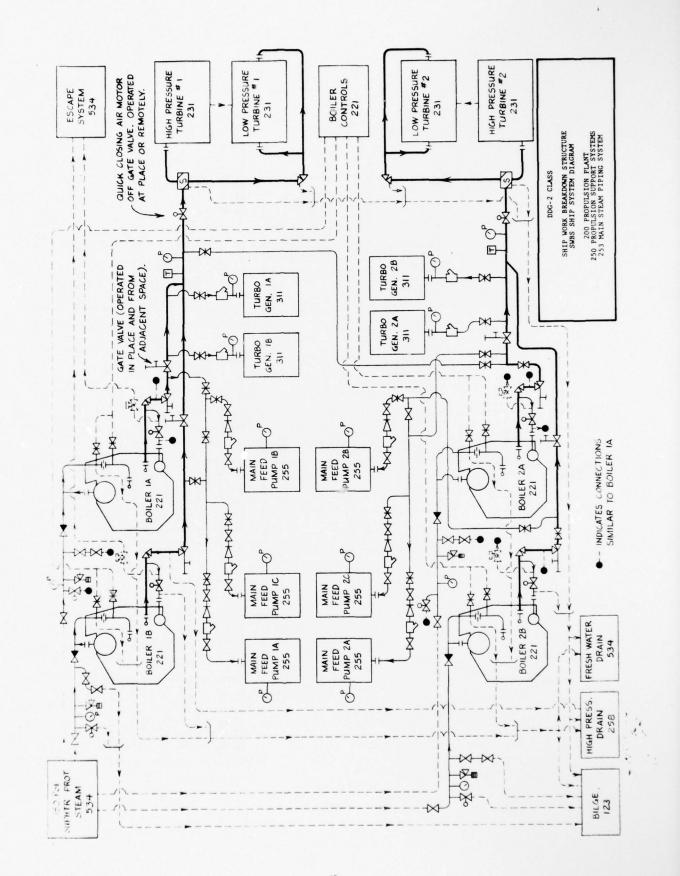


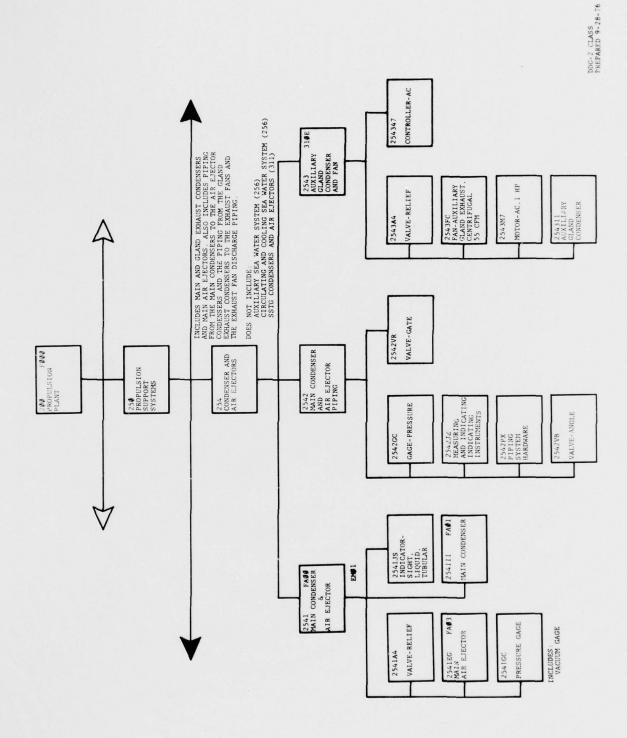


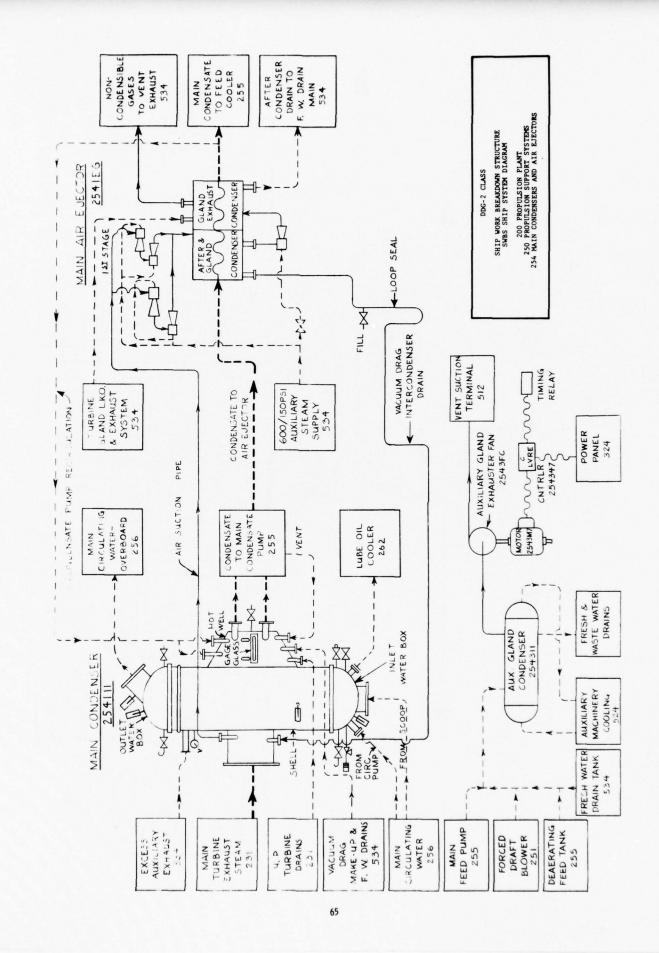


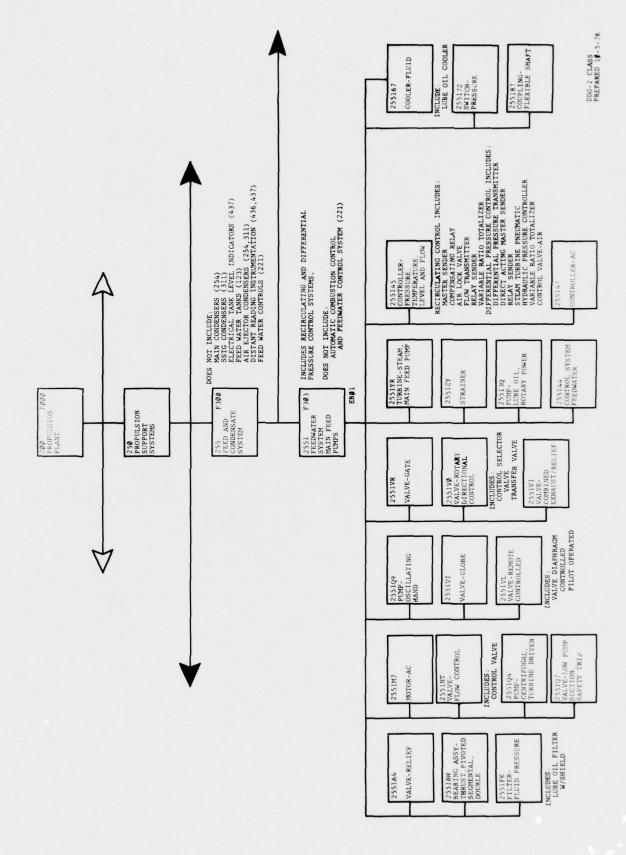
SHIP WORK BREAKDOWN STRUCTURE SWBS SHIP SYSTEM DIAGRAM 200 PROPLLSION PLANT 250 PROPLLSION SUPPORT SYSTEMS 252 PROPLLSION CONTROL SYSTEMS

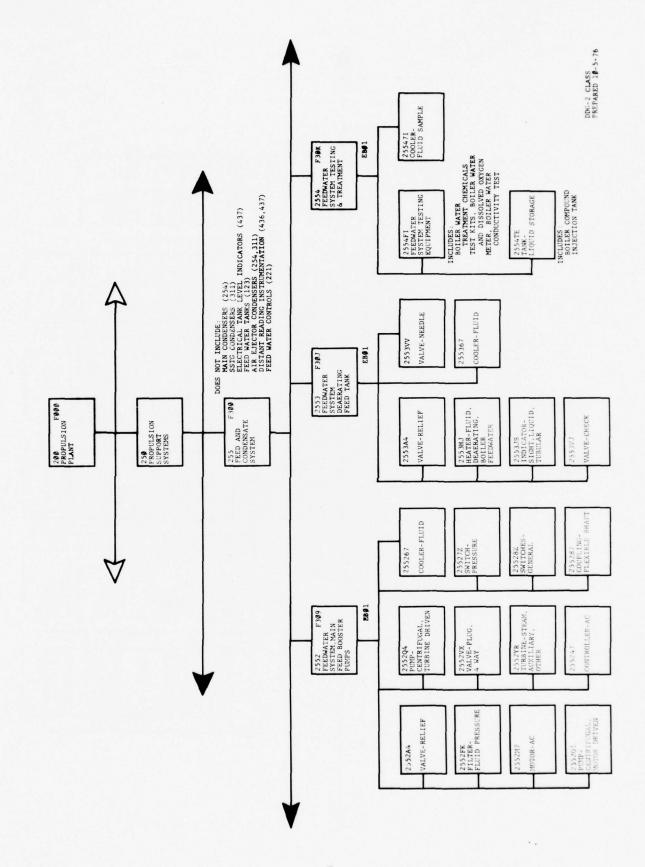


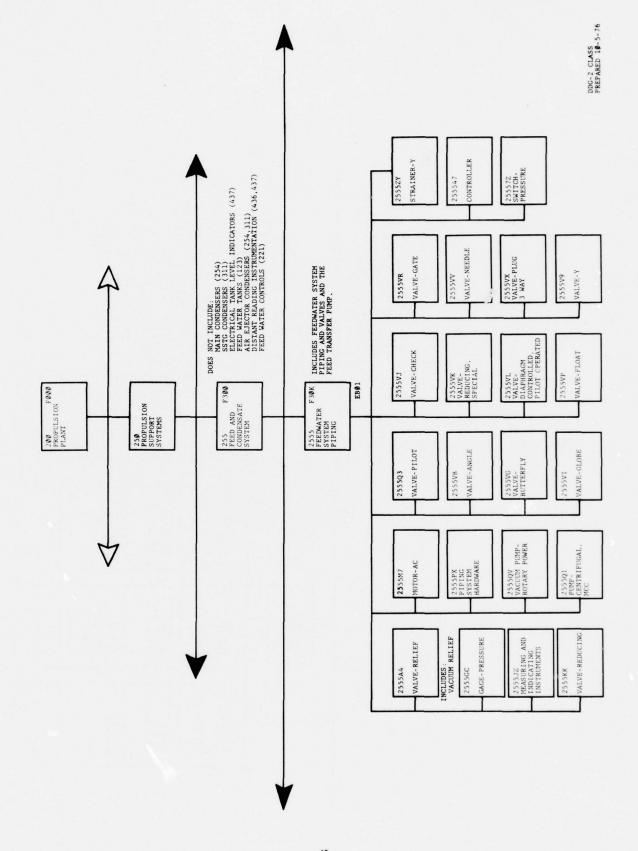


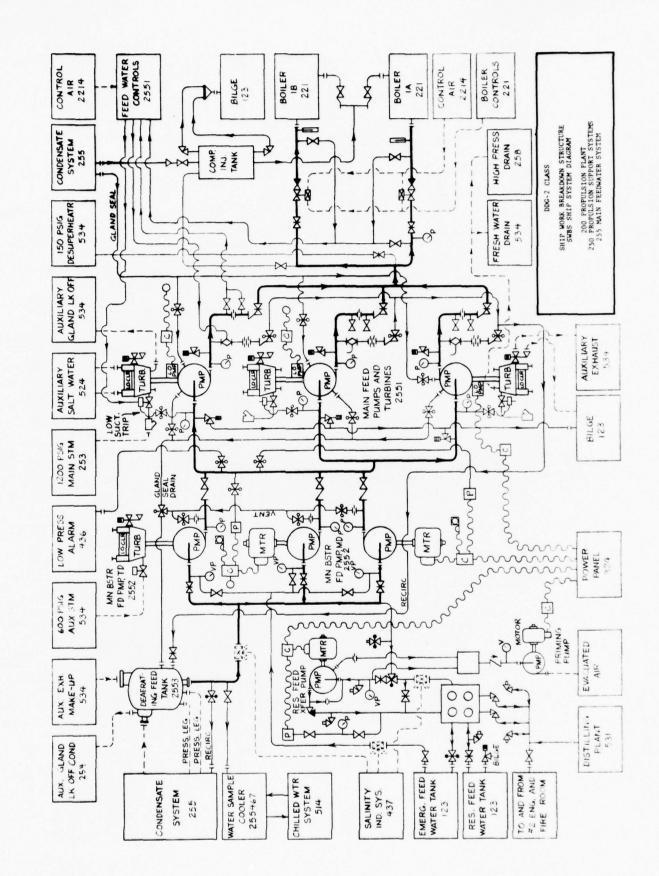


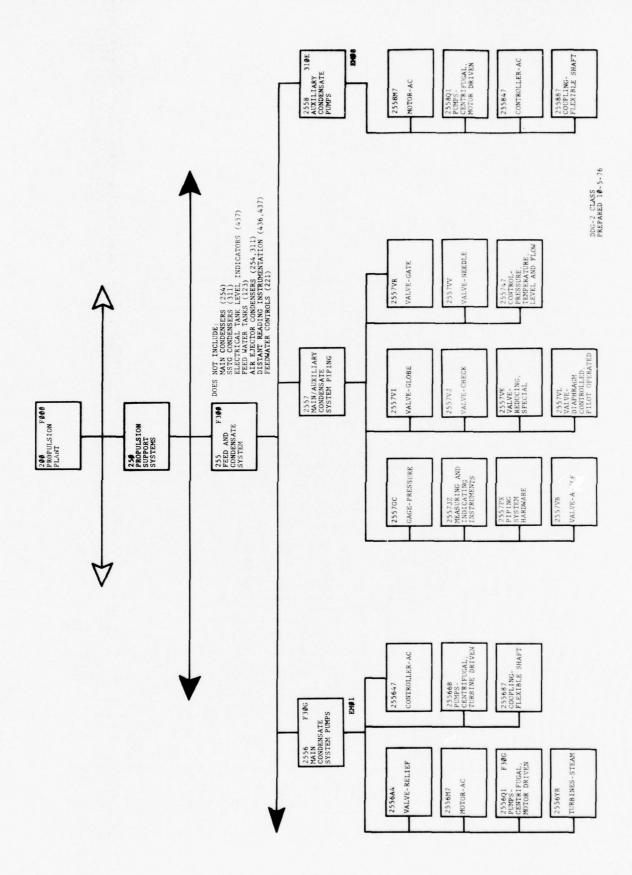


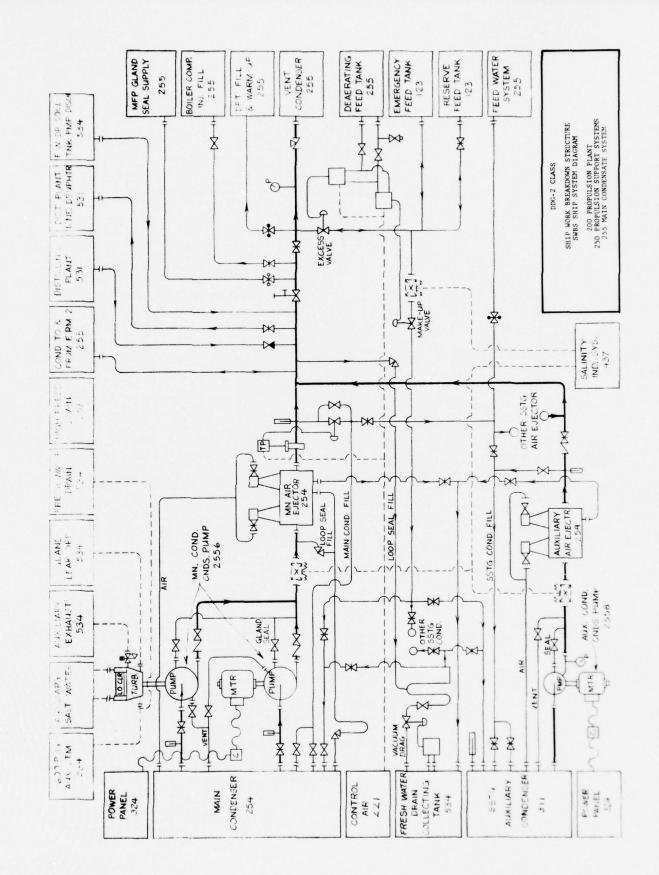


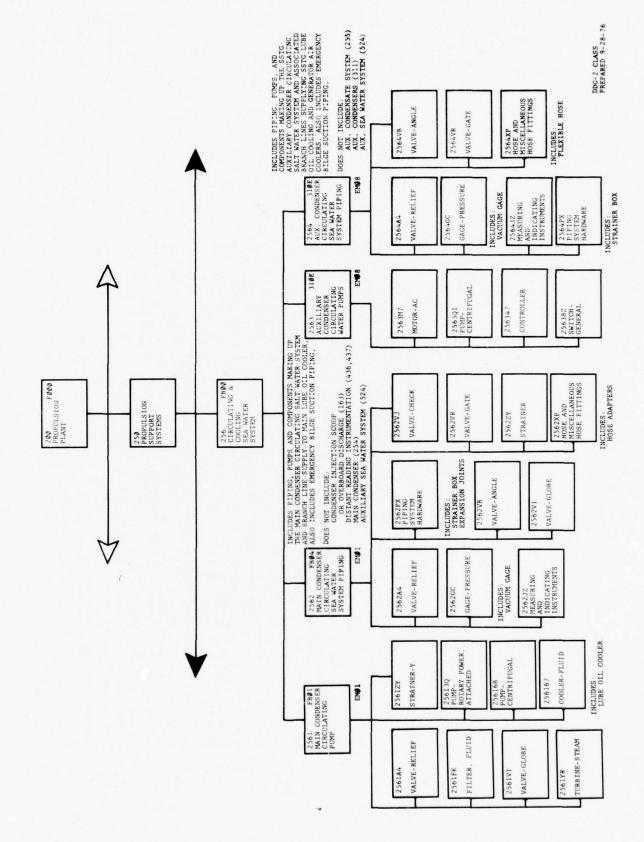


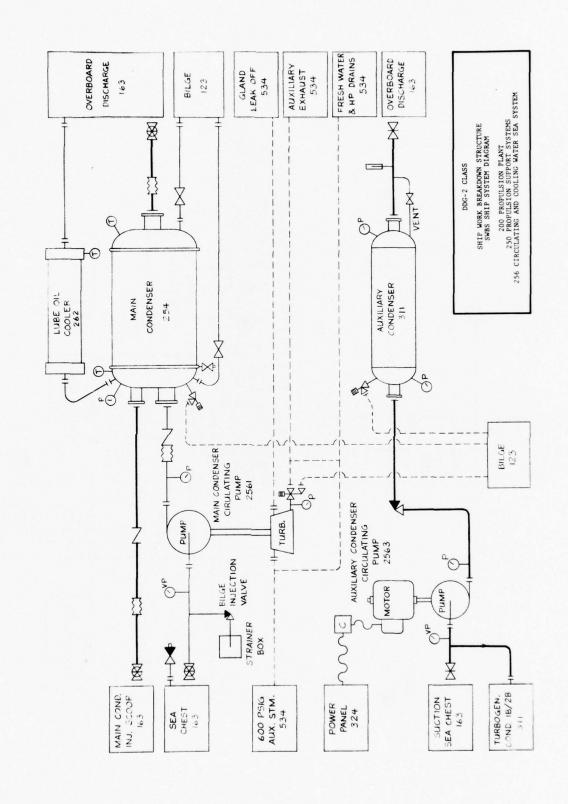


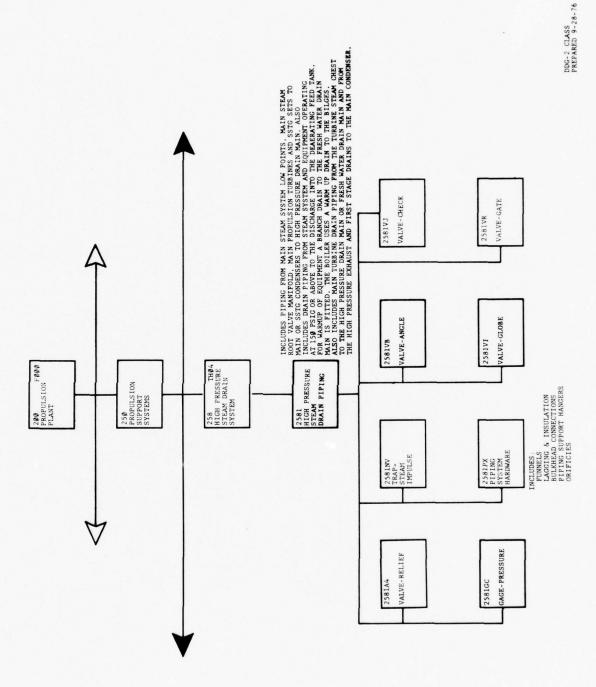


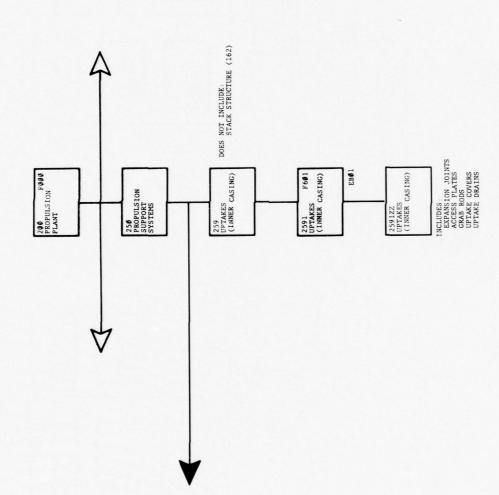


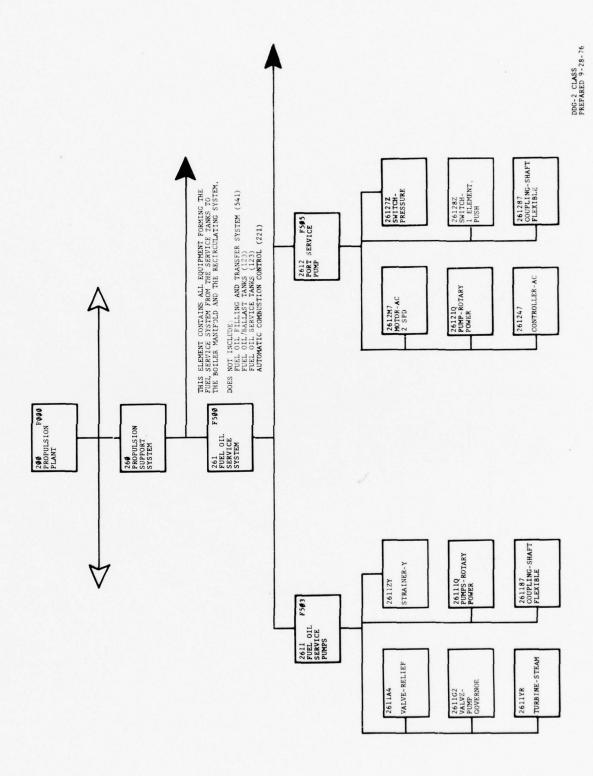


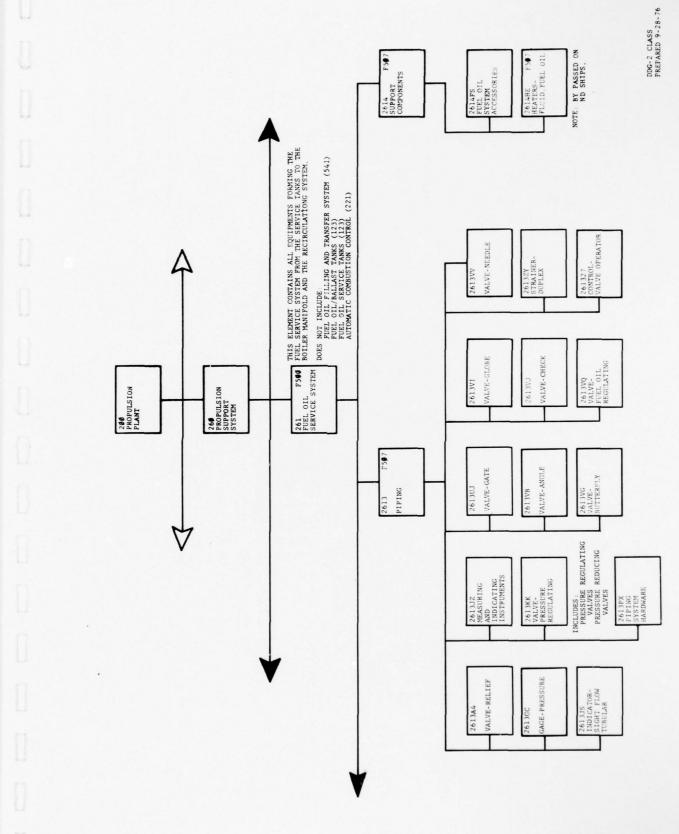


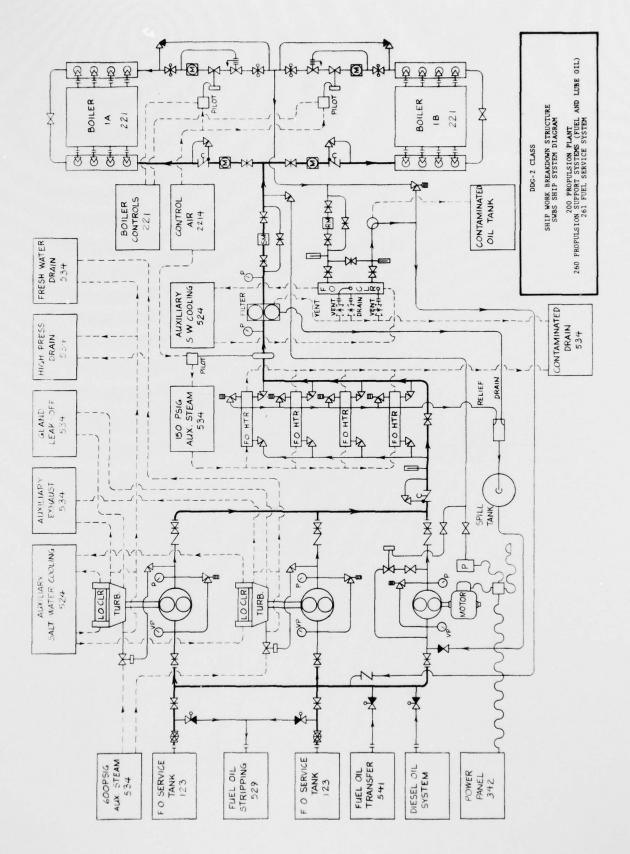


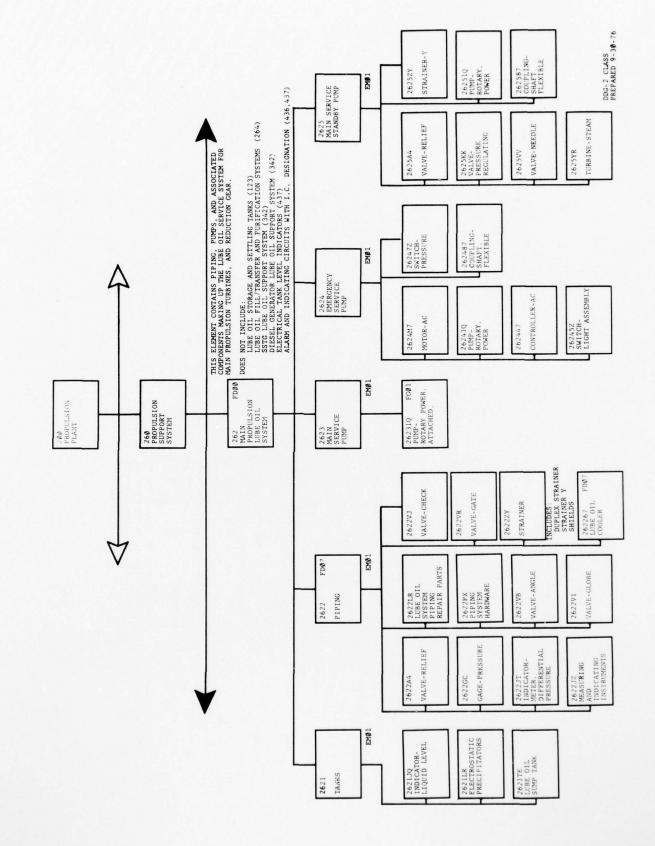


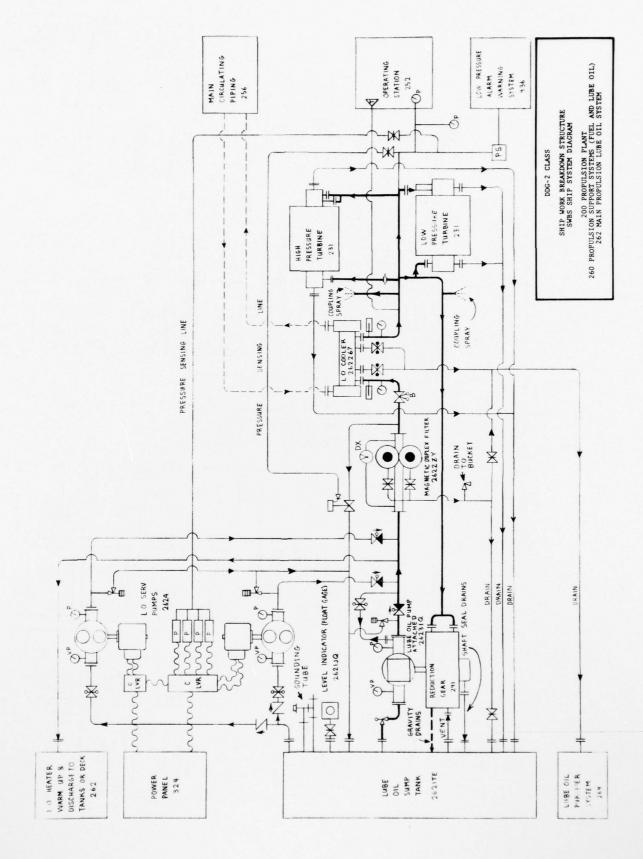


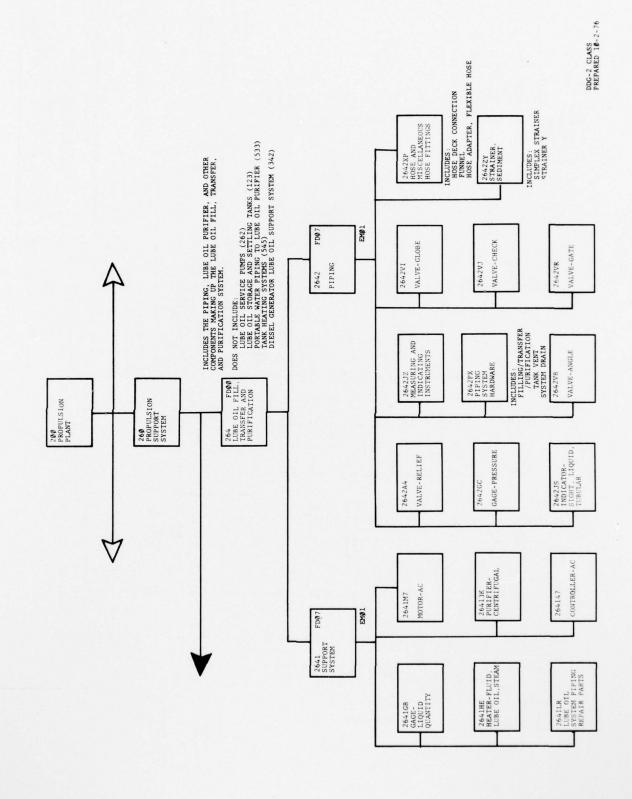


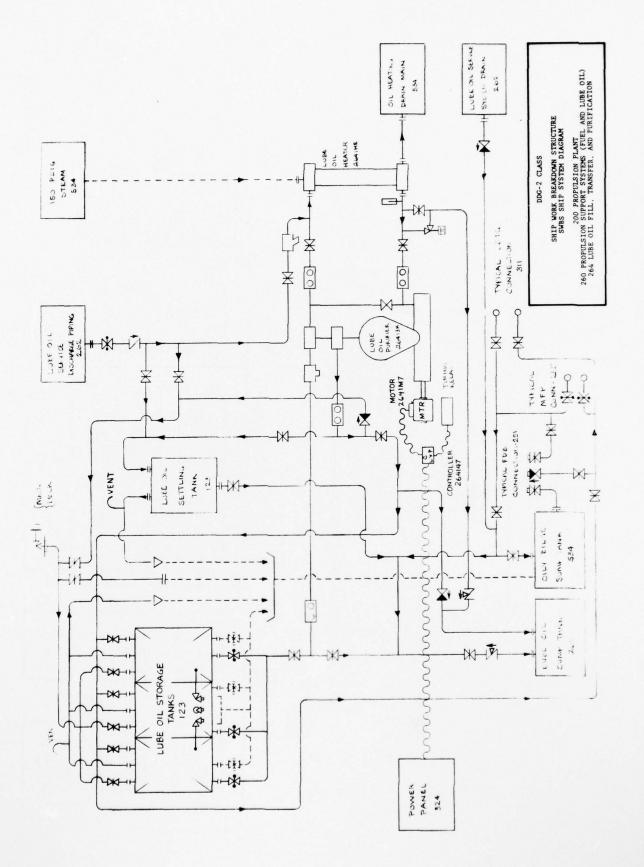


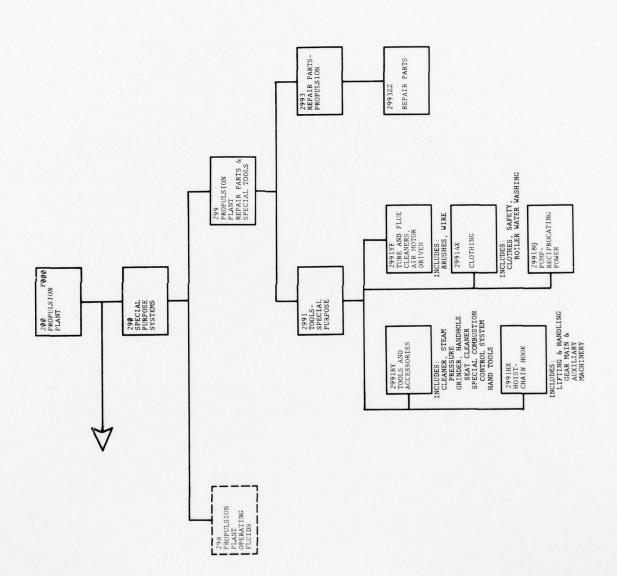


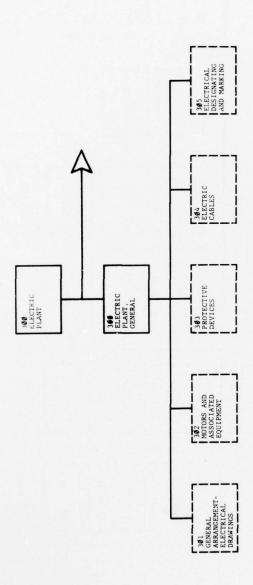


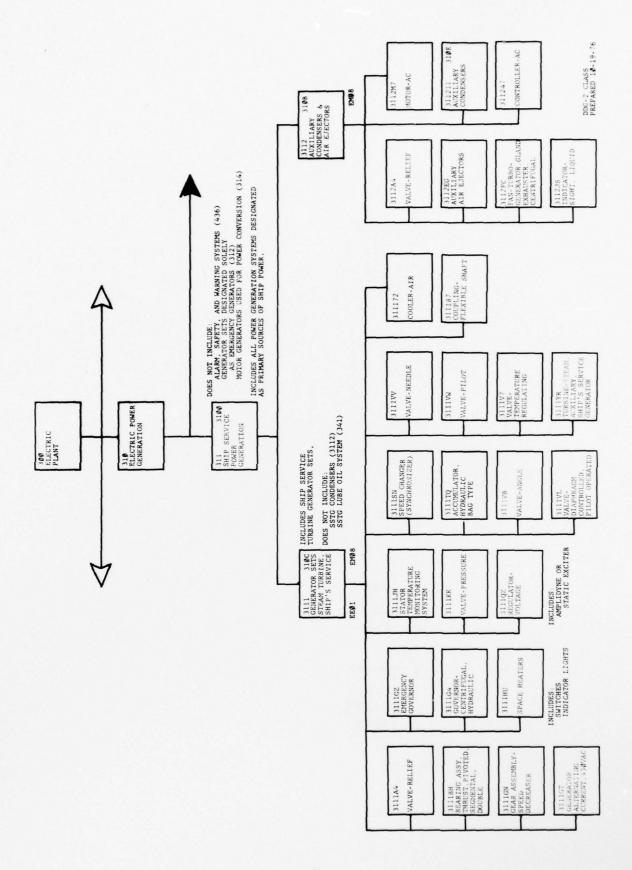


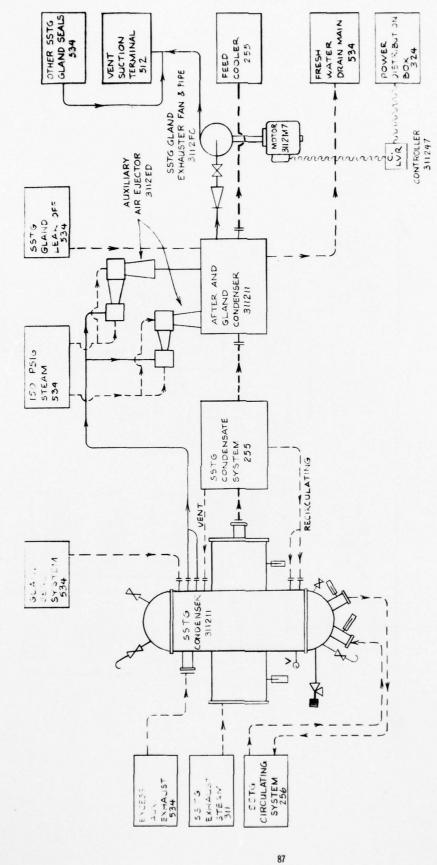




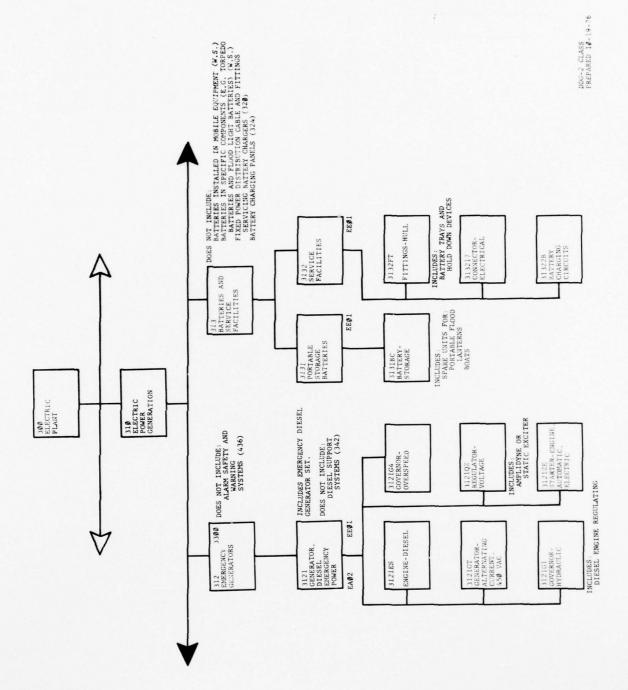




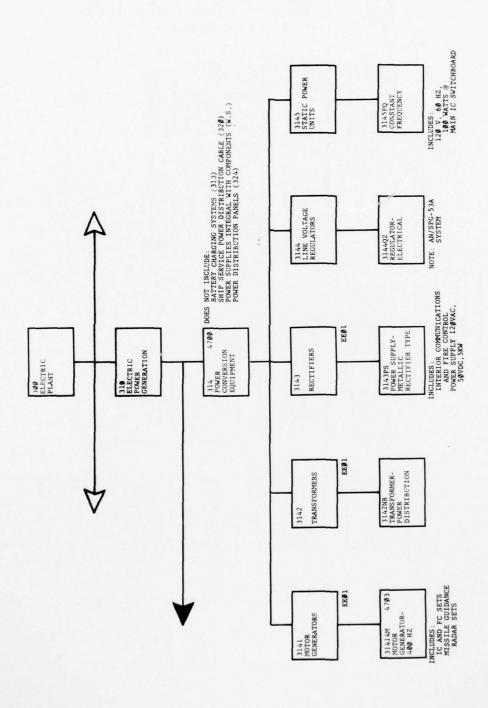


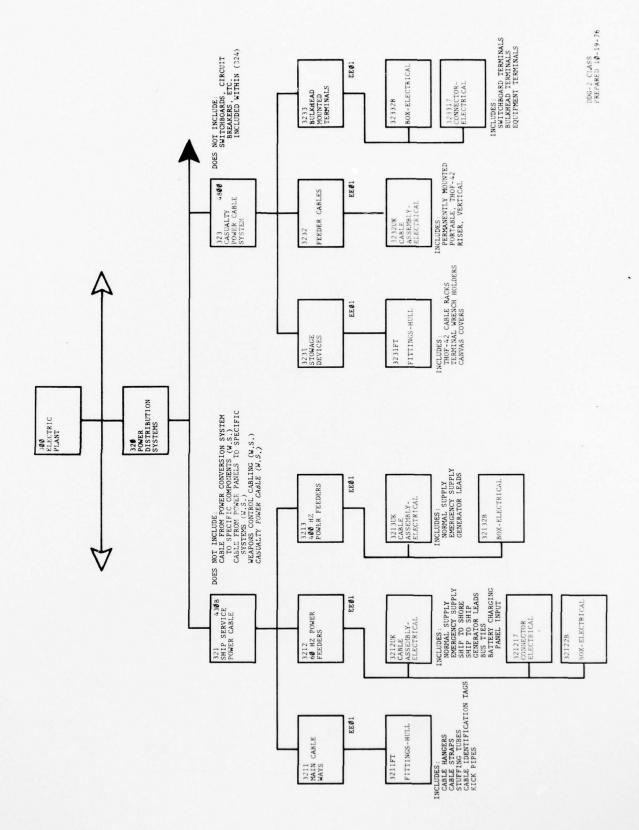


300 ELECTRIC PLANT 310 ELECTRIC POWER GENERATION 311 SHIP'S SERVICE POWER GENERATION CONDENSERS SHIP WORK BREAKDOWN STRUCTURE SWBS SHIP SYSTEM DIAGRAM DDG-2 CLASS

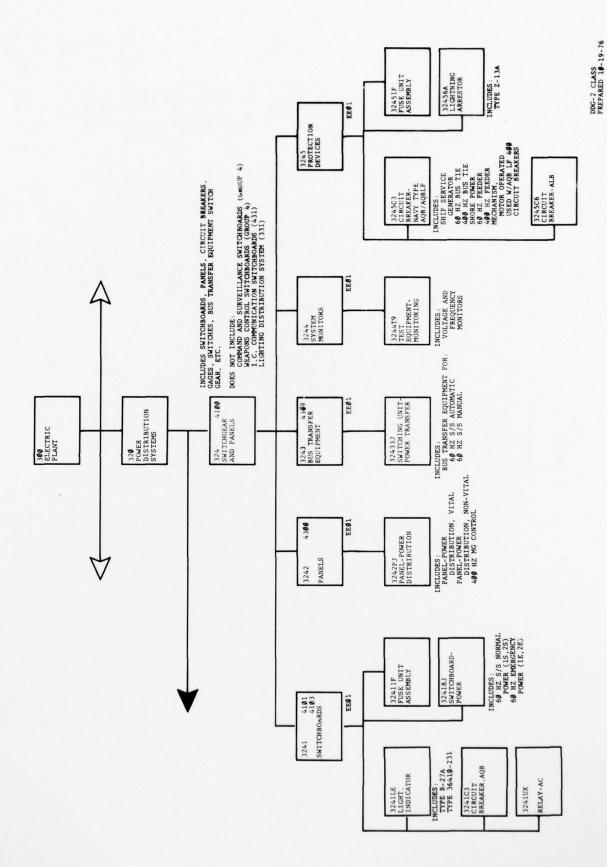


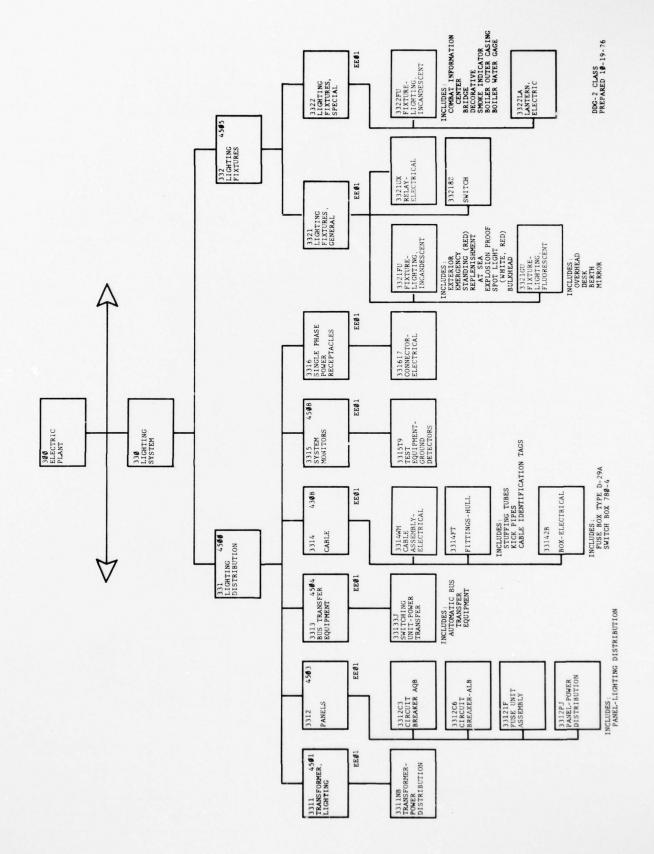
してしてしてして

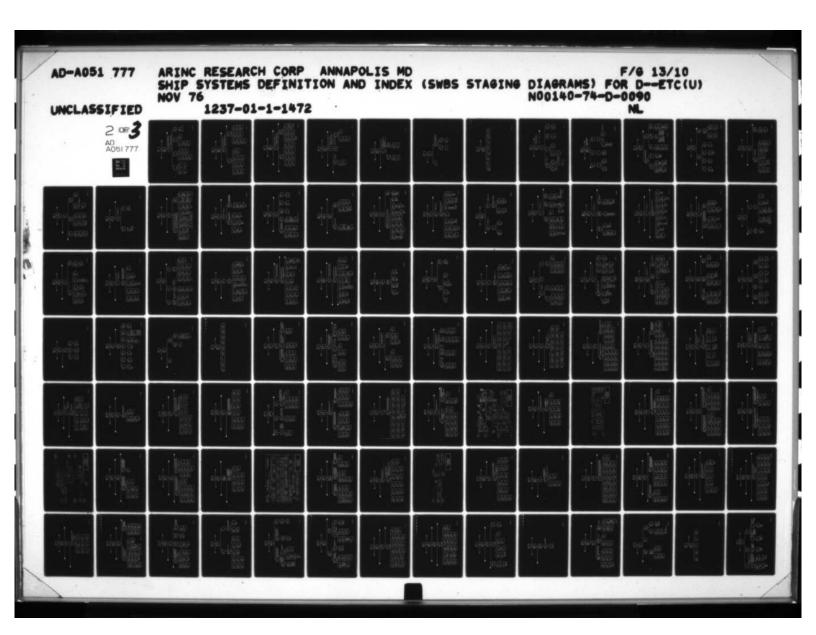




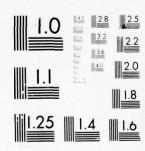
the state of the s



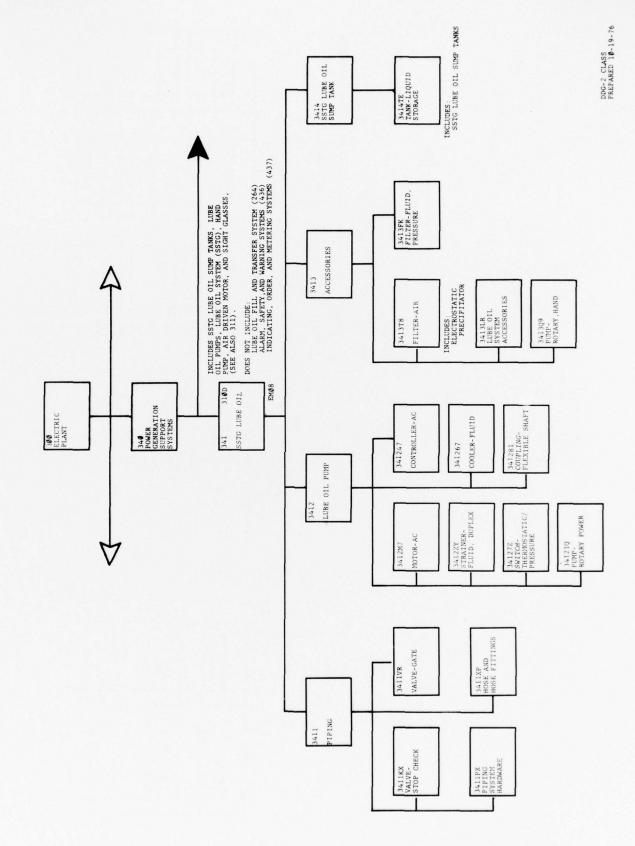


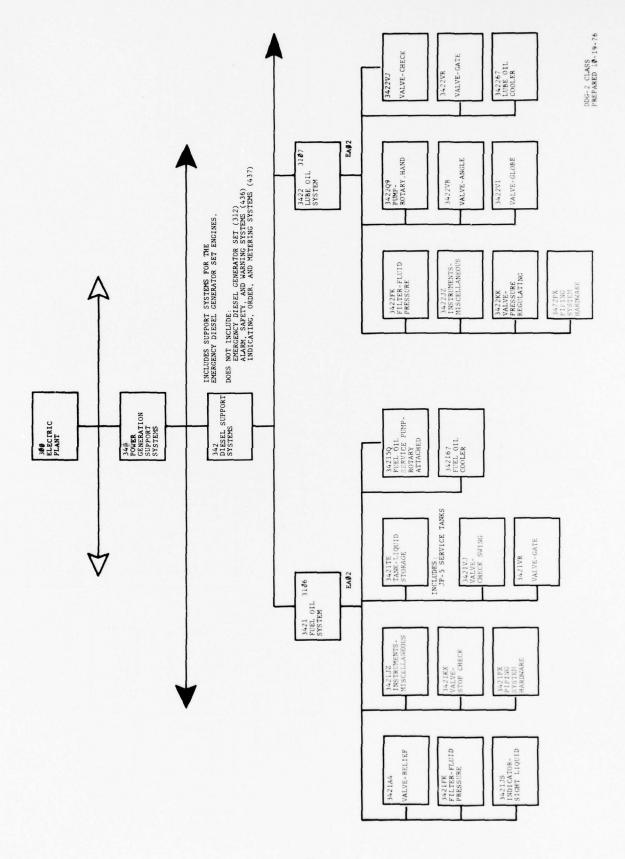


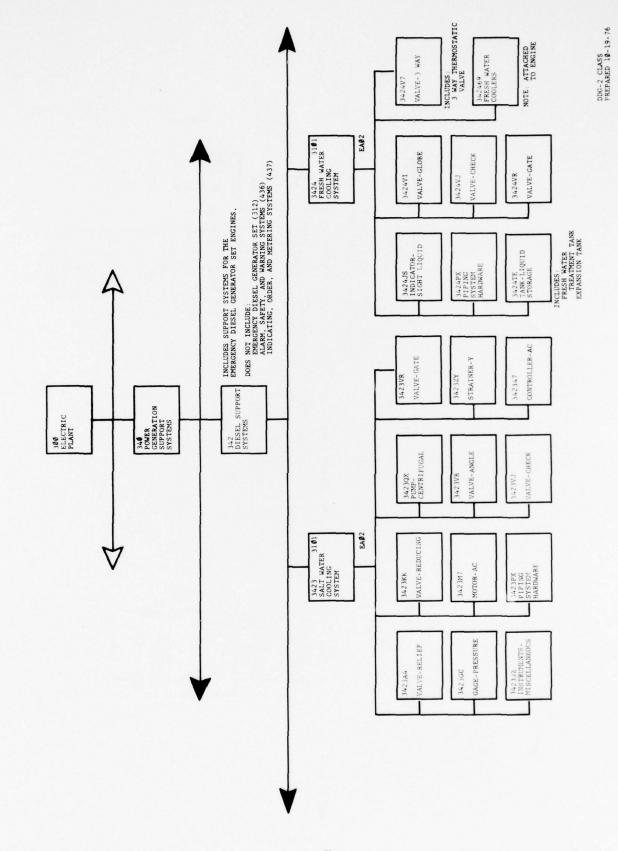
AD A051777

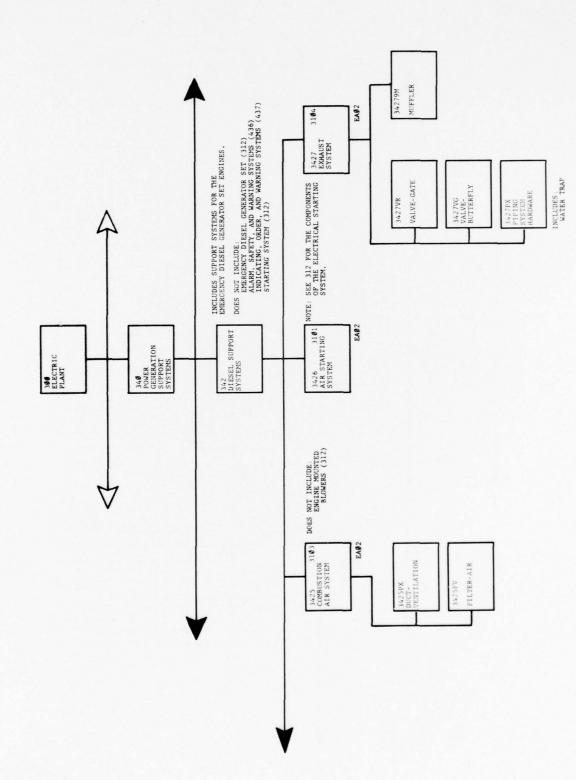


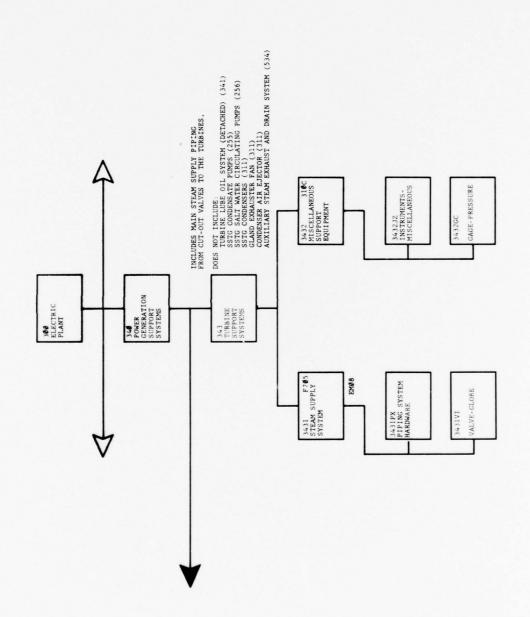
MICROCOPY RESOLUTION TEST CHART

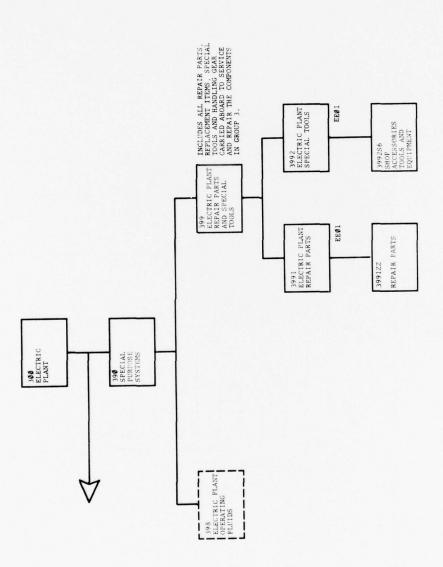


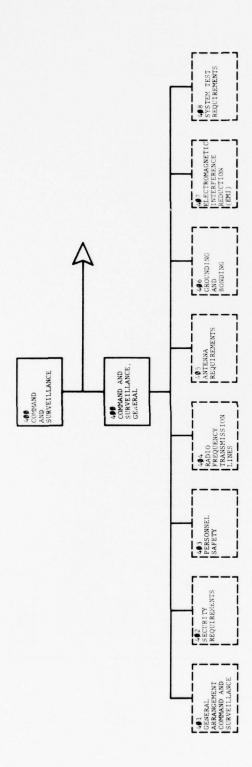


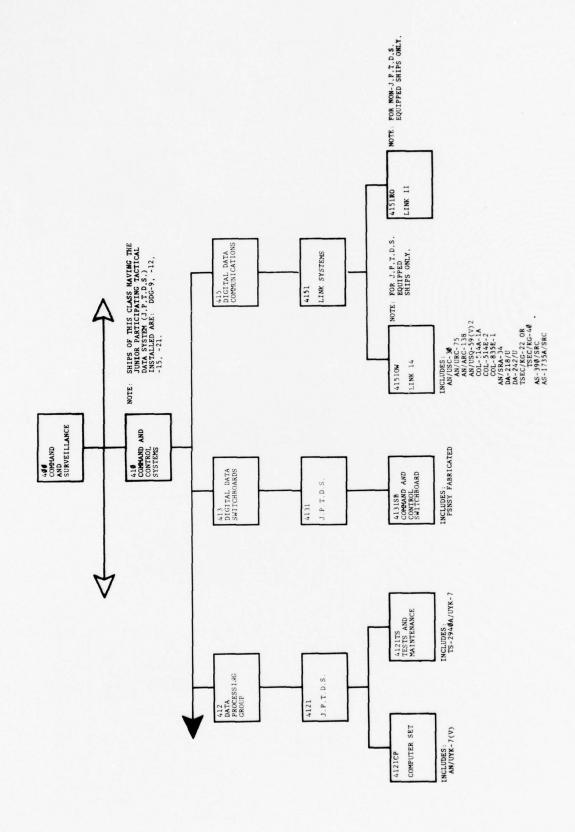




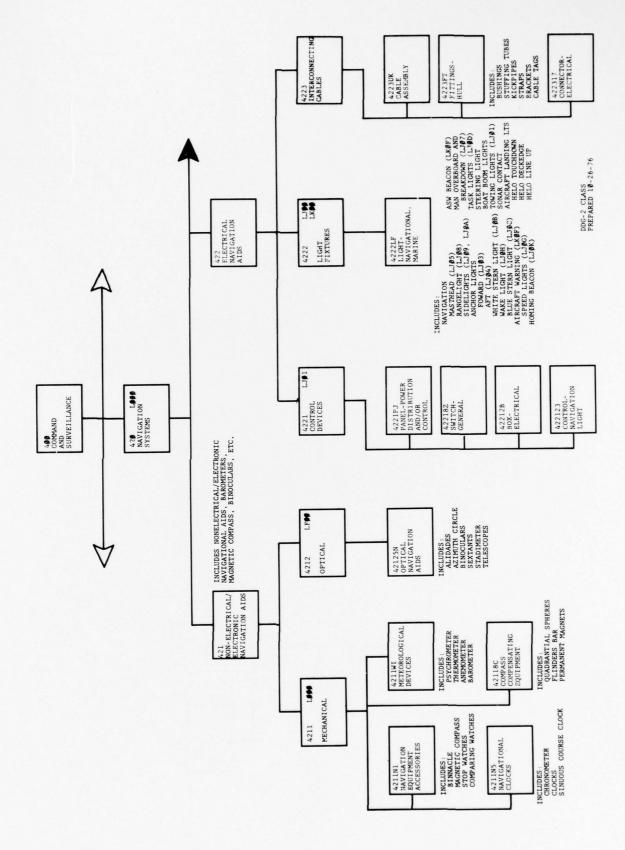


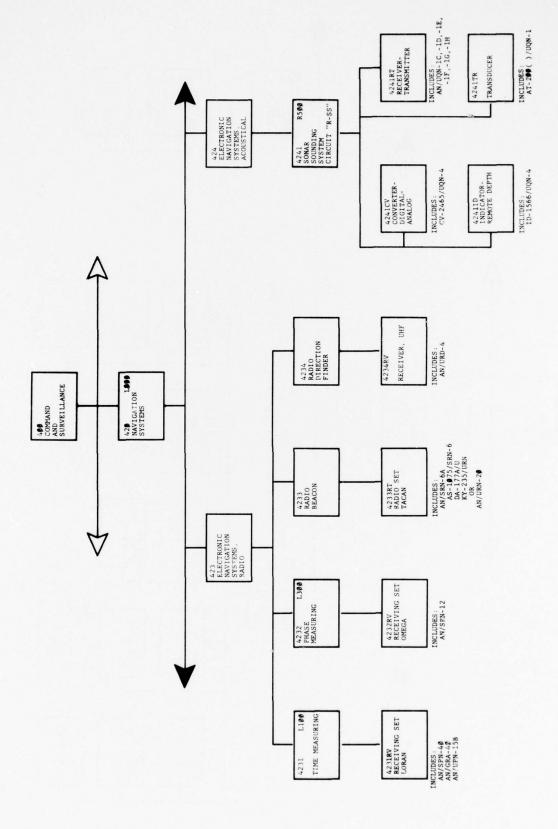


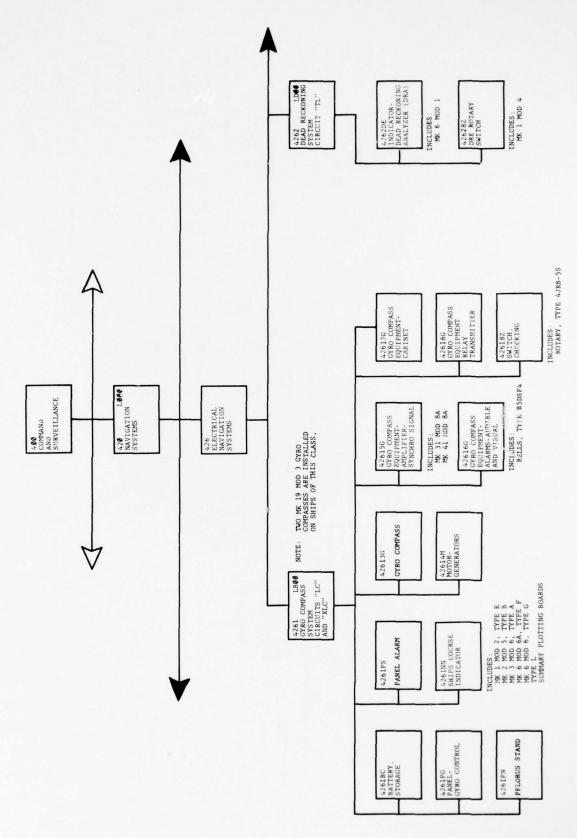


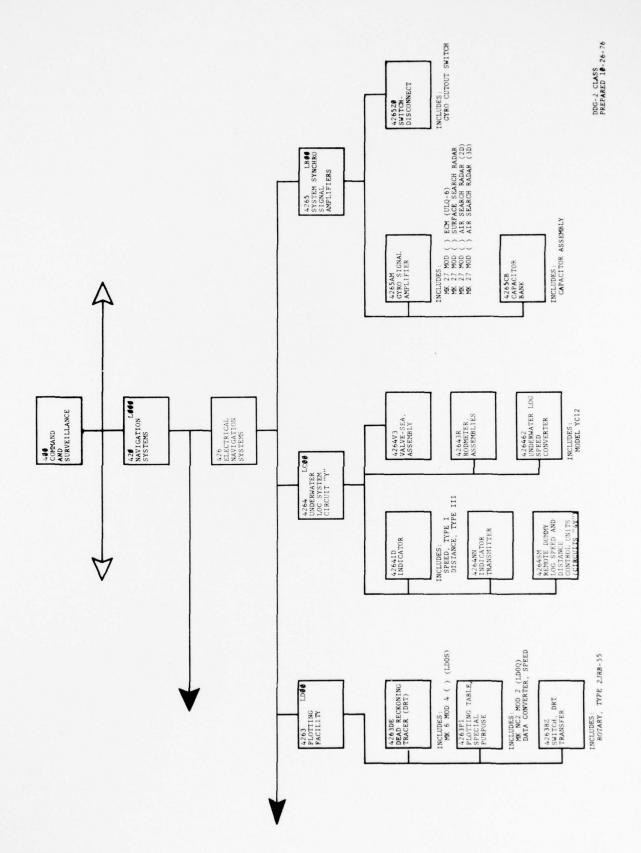


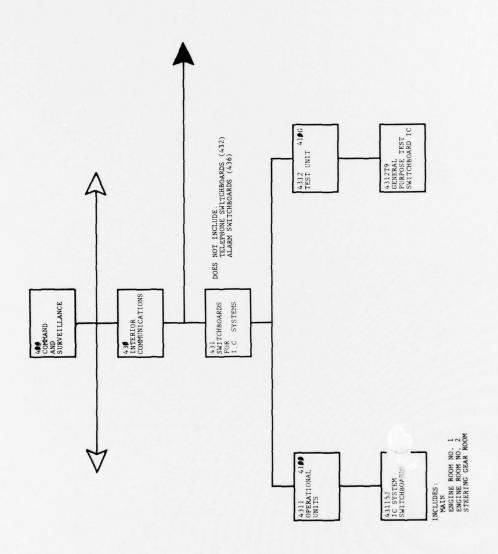
The state of the s

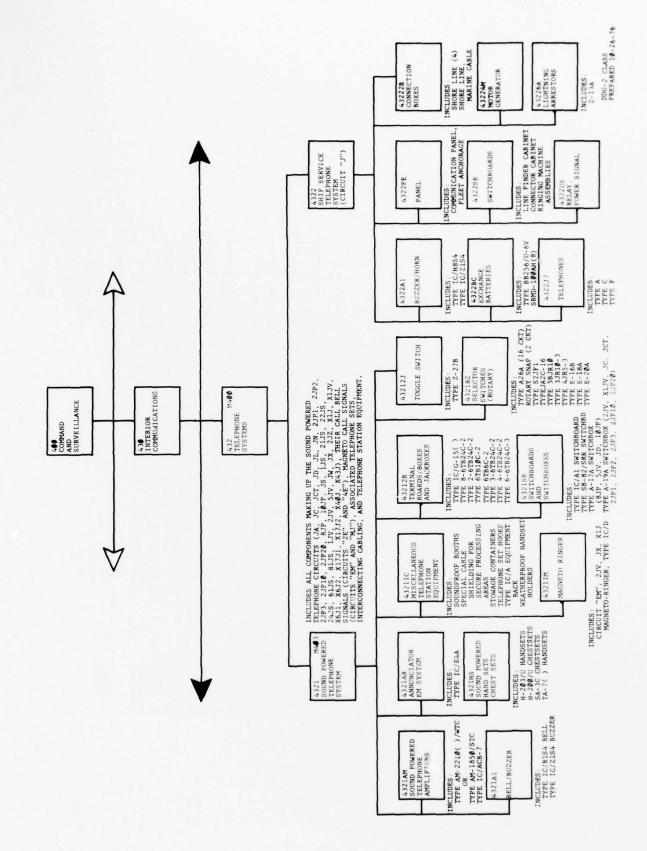


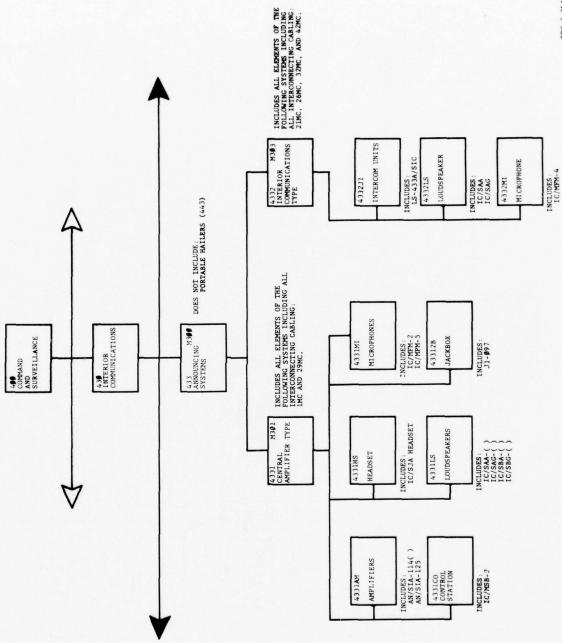


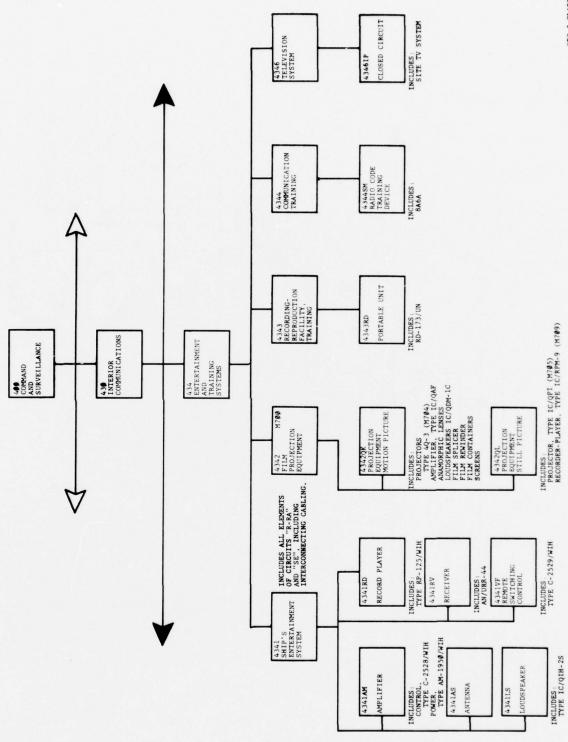


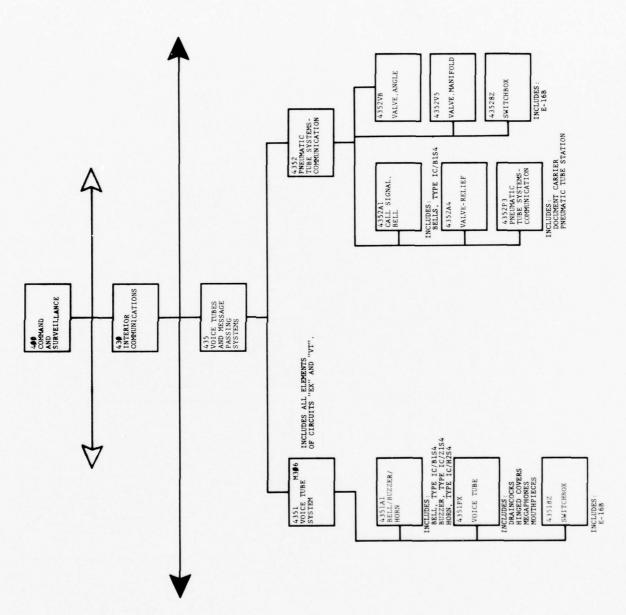


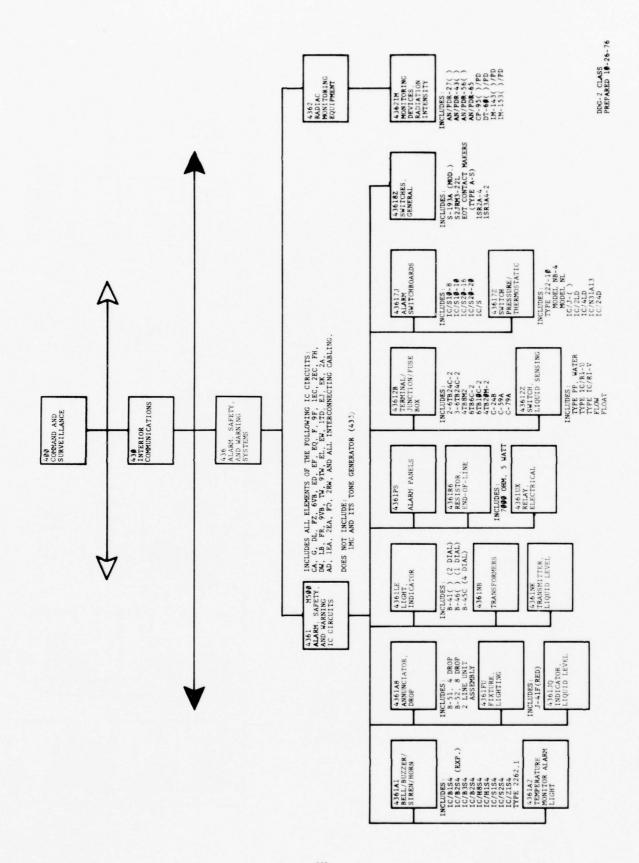


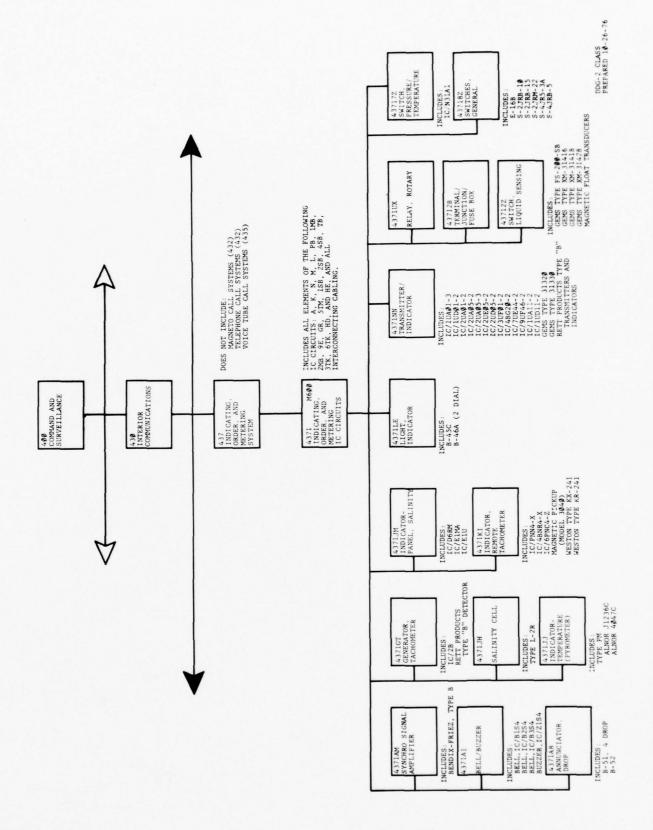


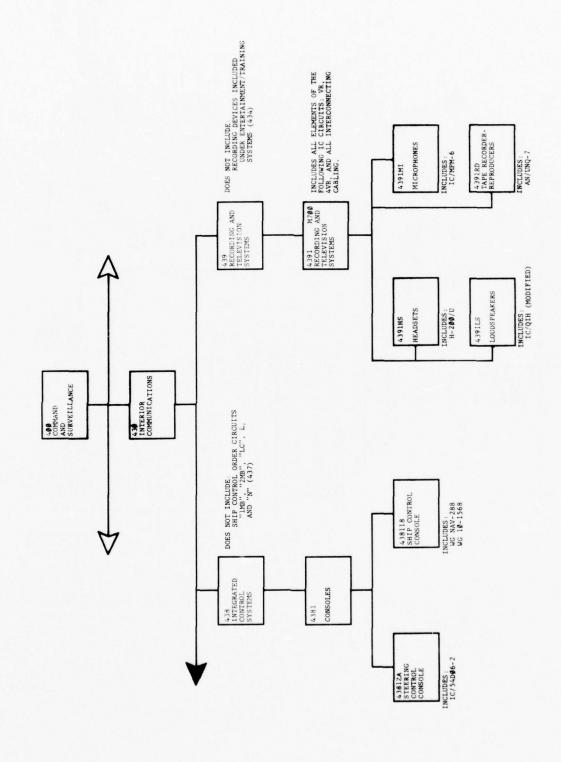


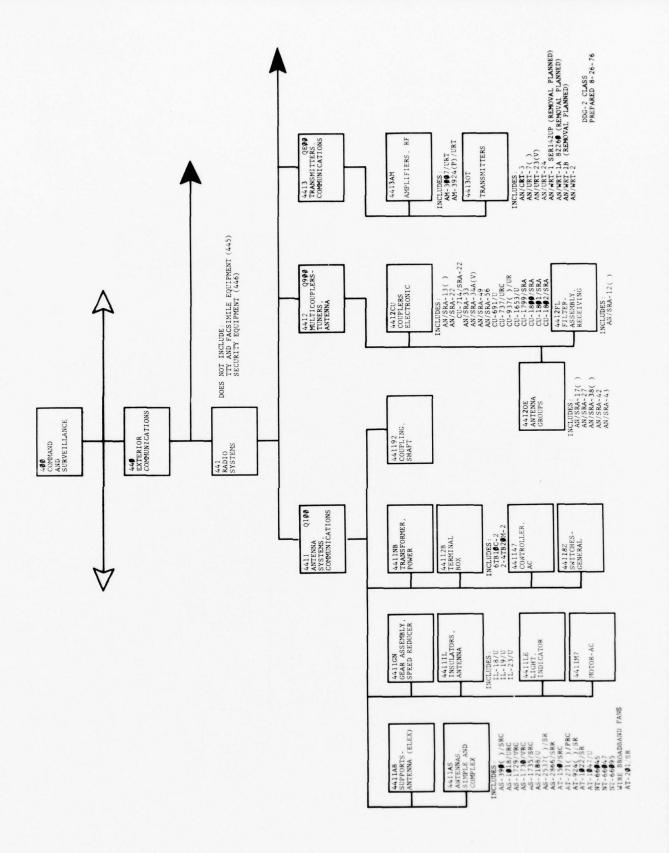


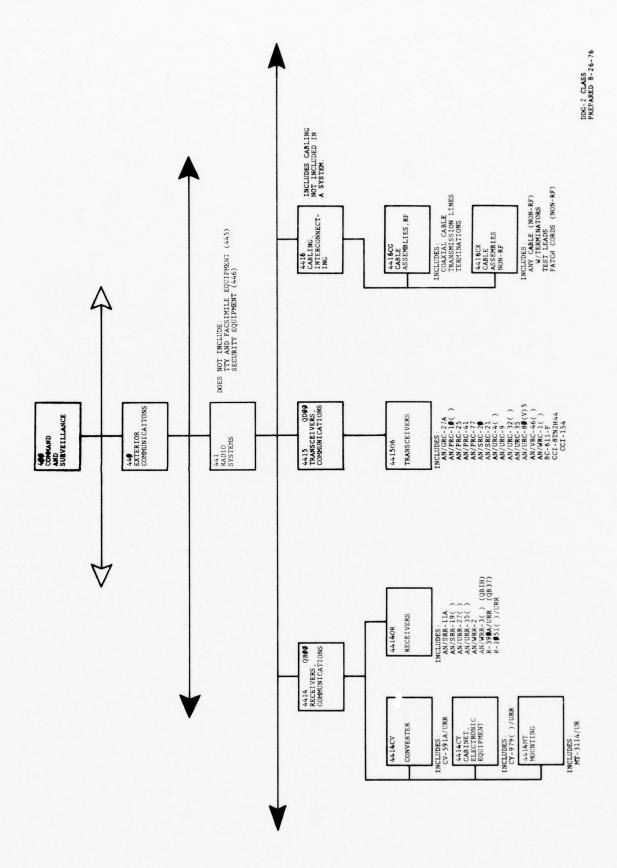


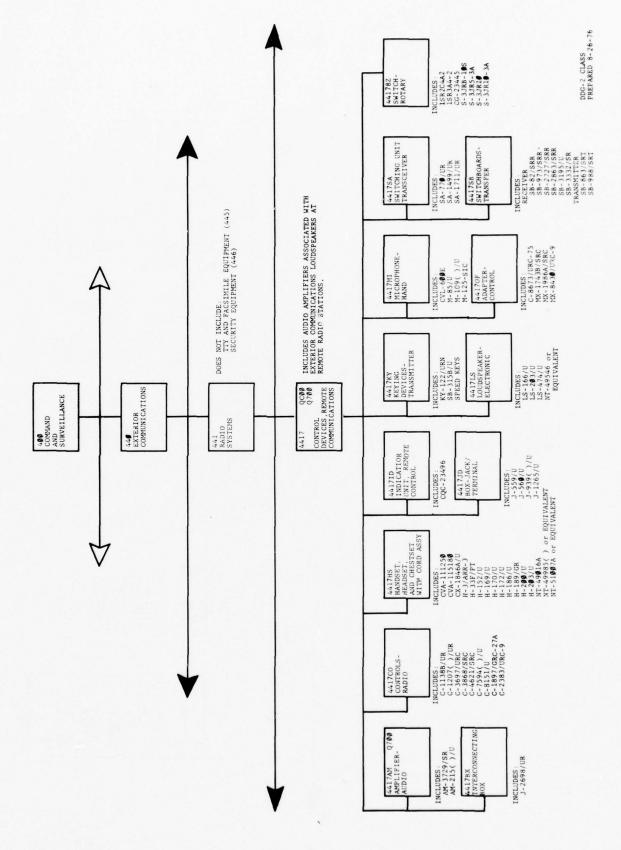


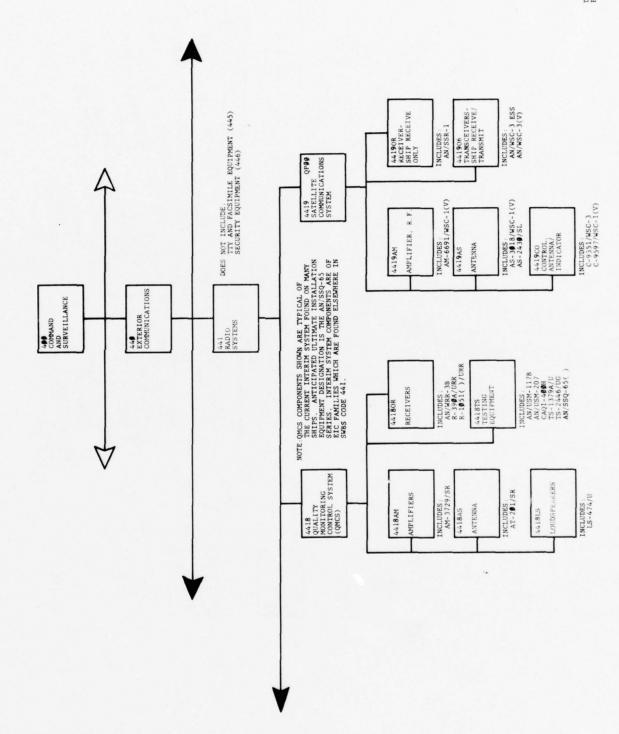


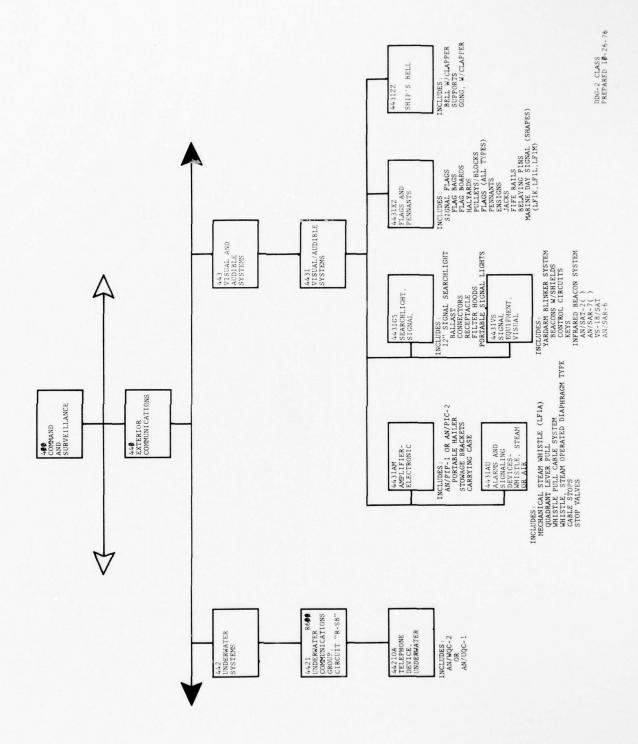


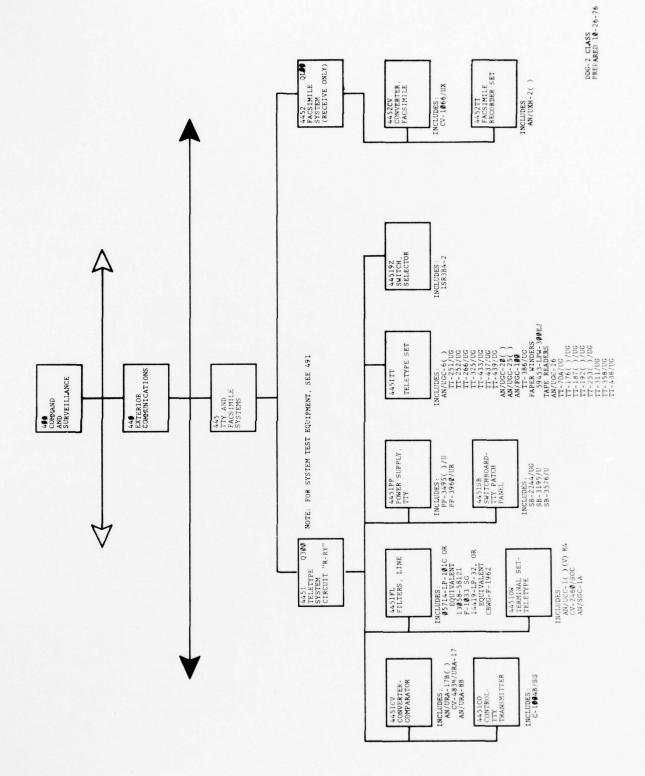


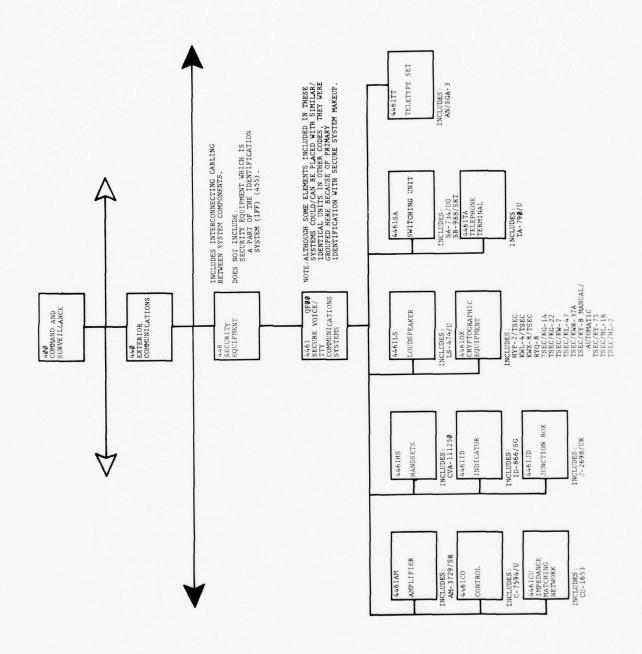


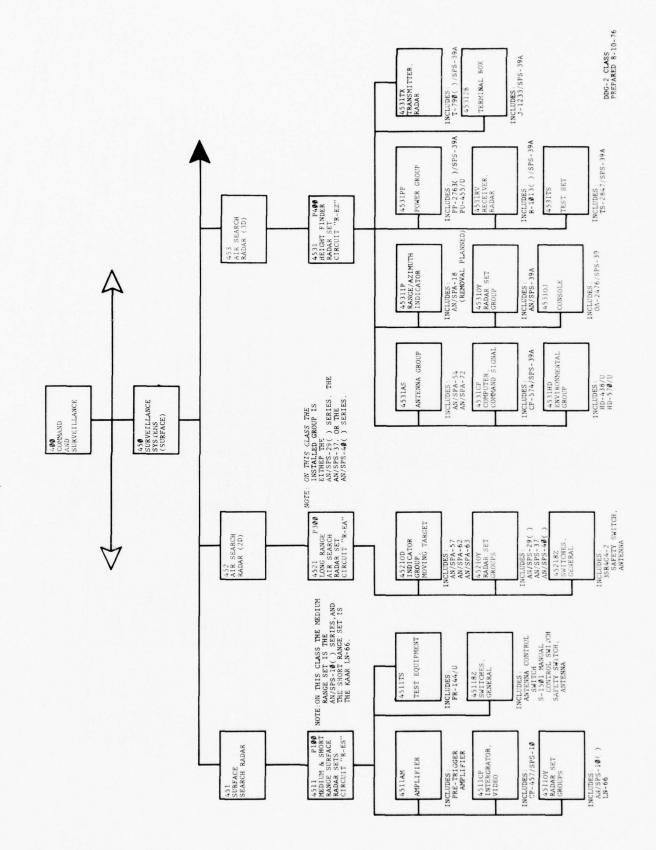


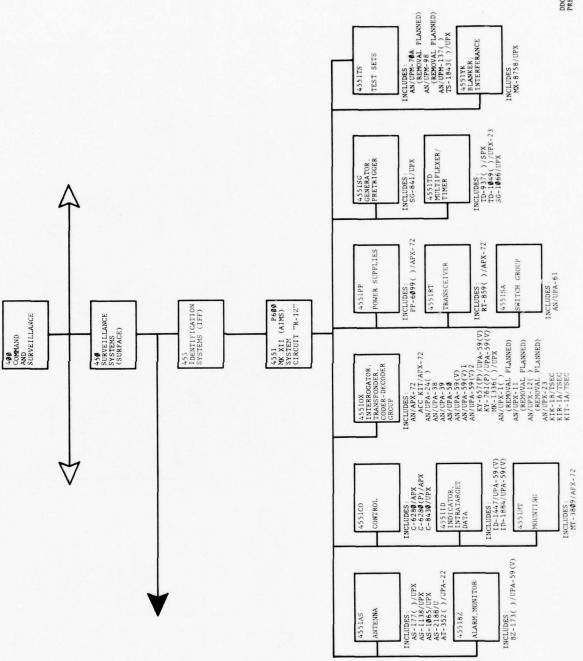


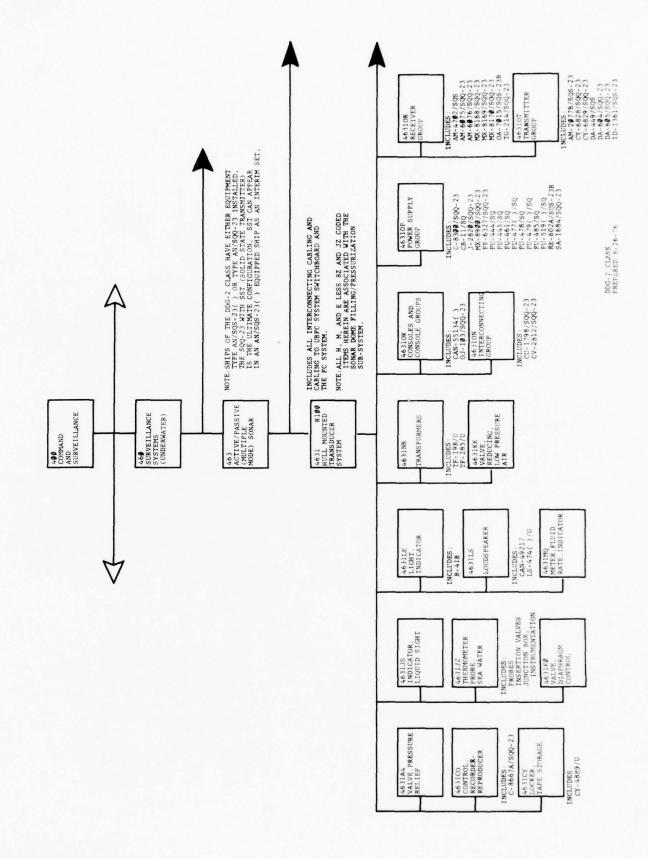


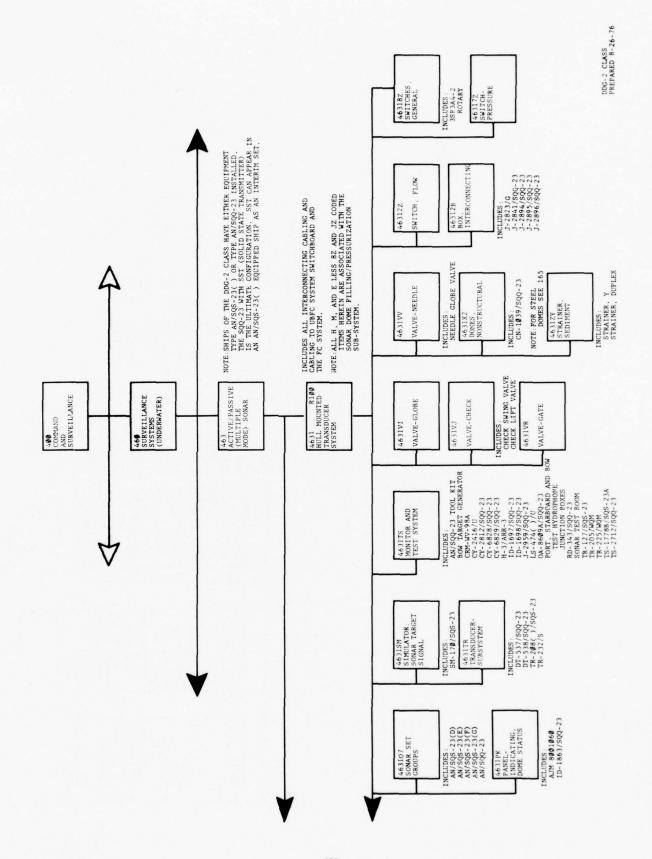


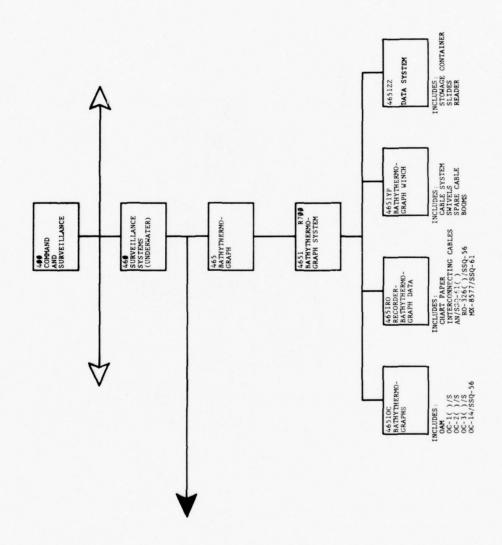


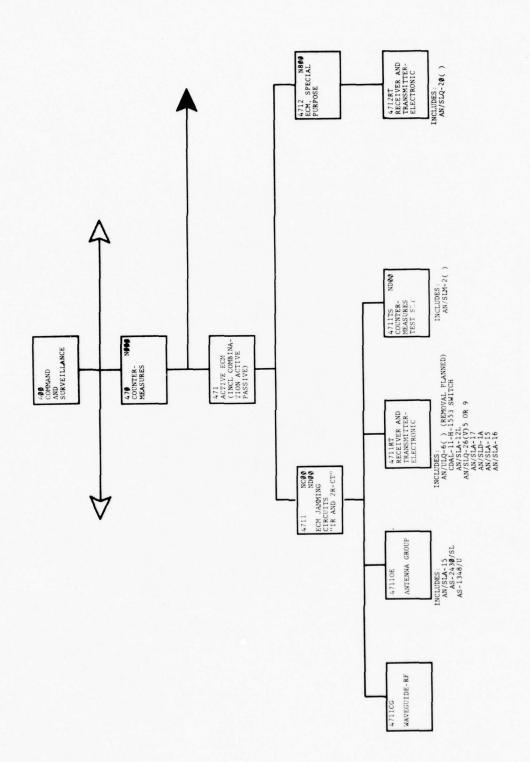


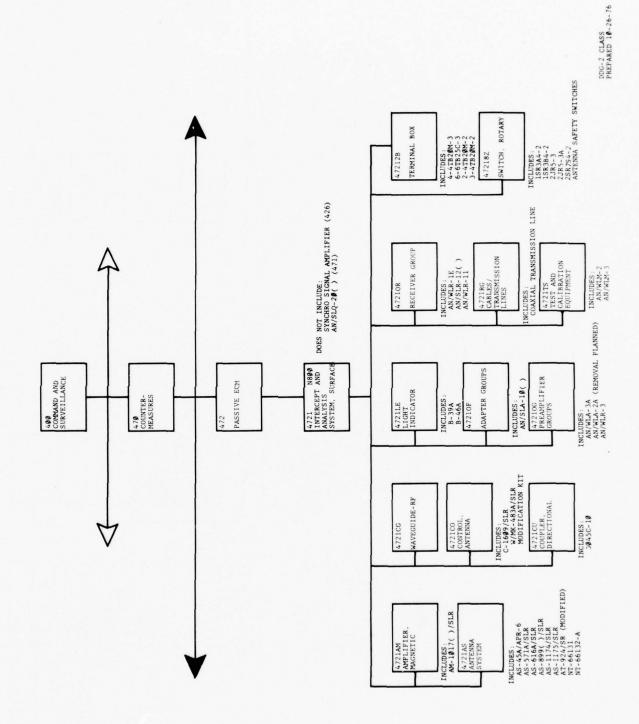


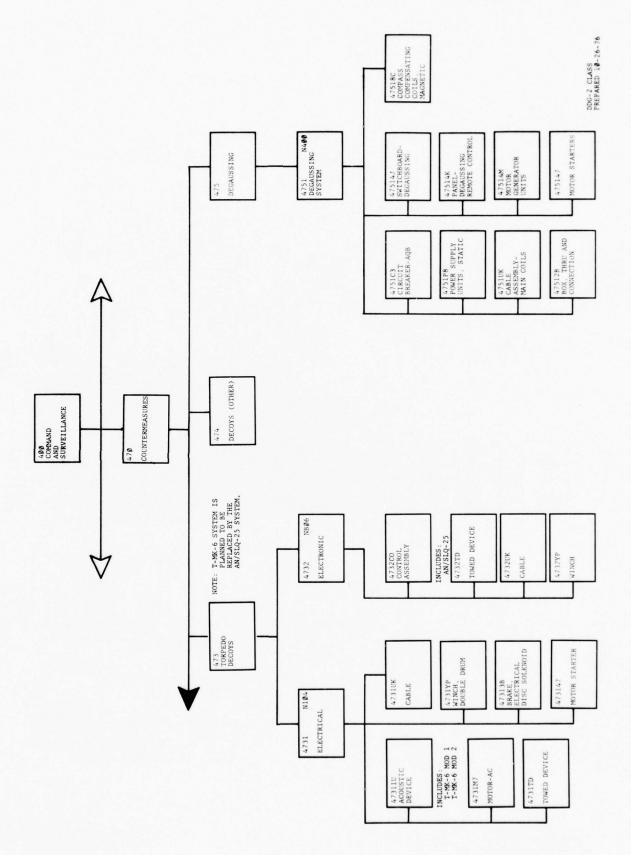


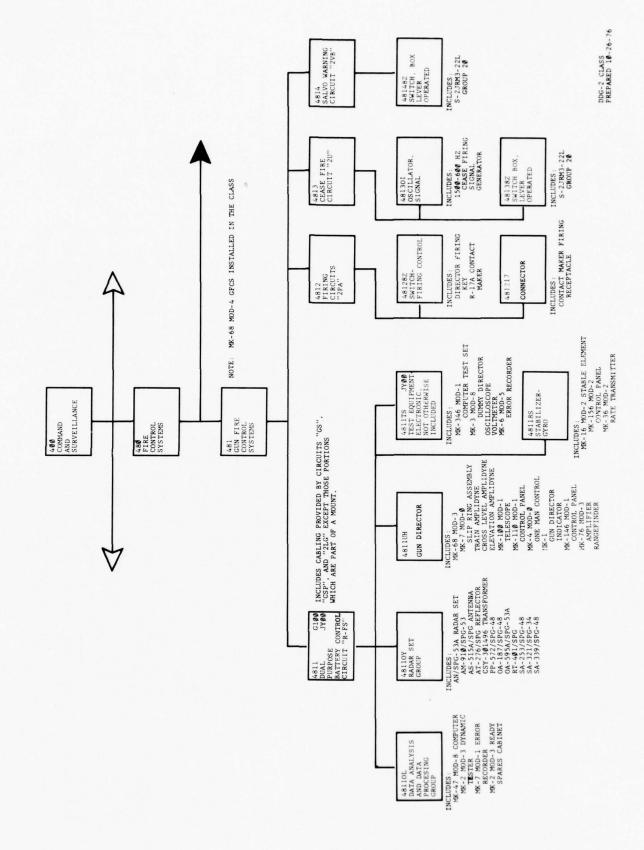


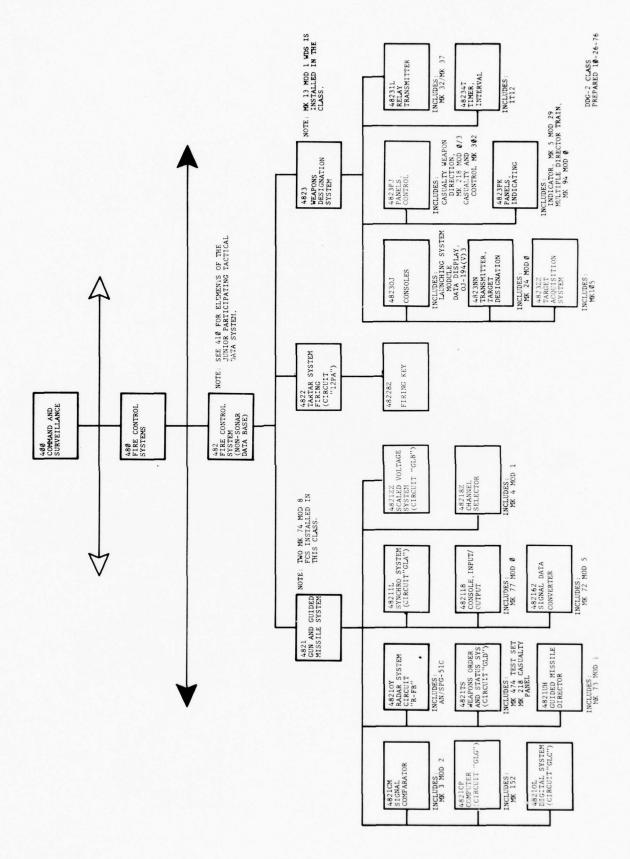


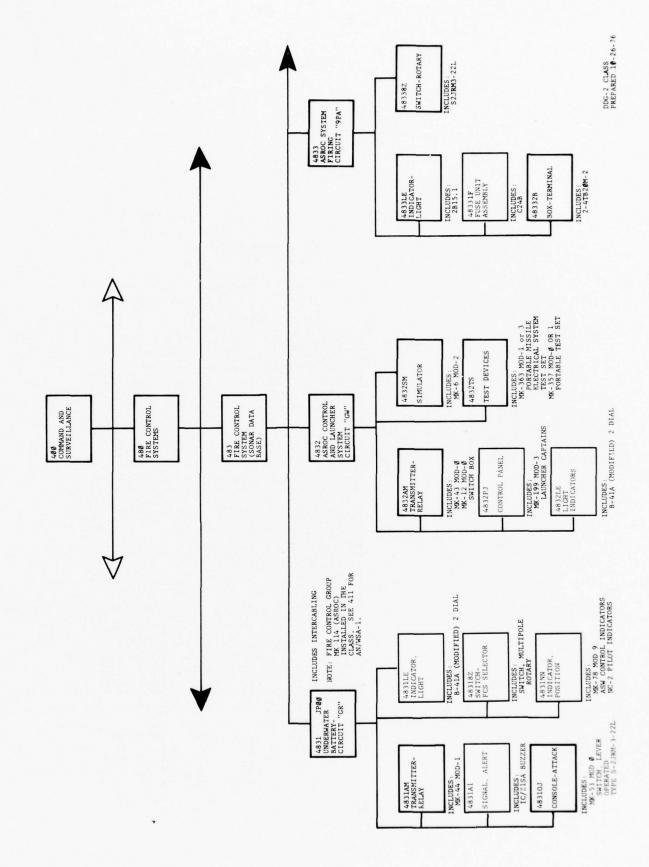


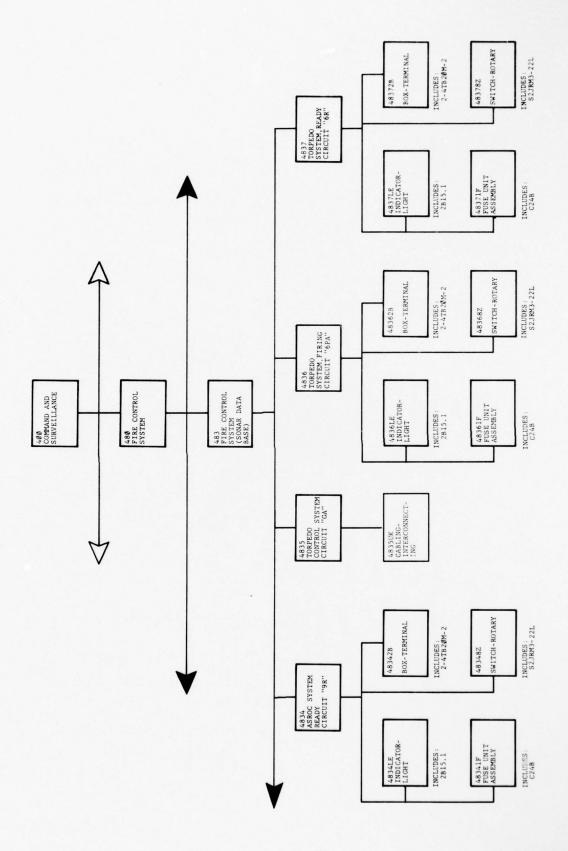


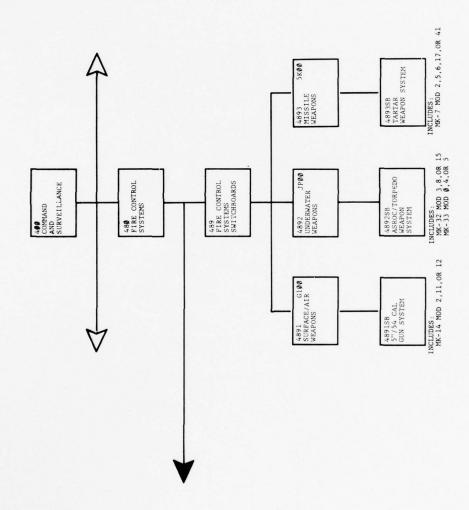


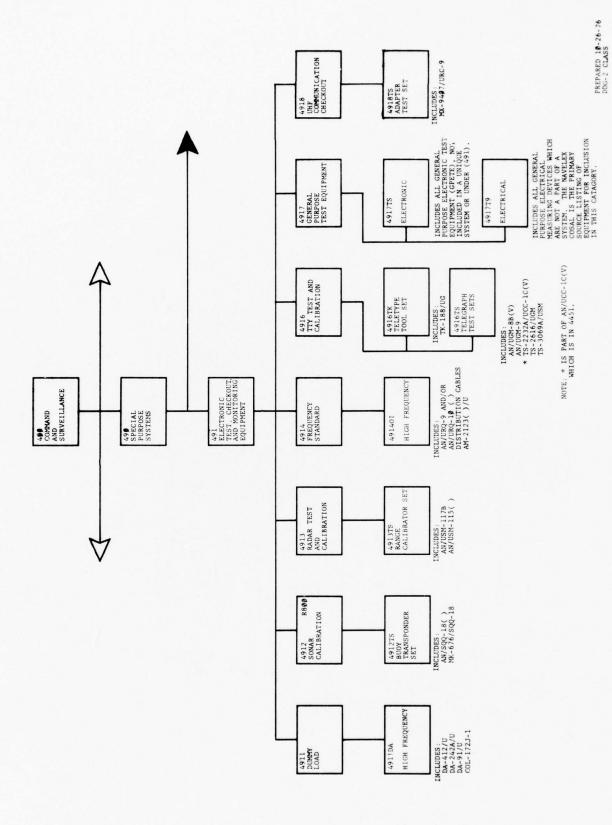


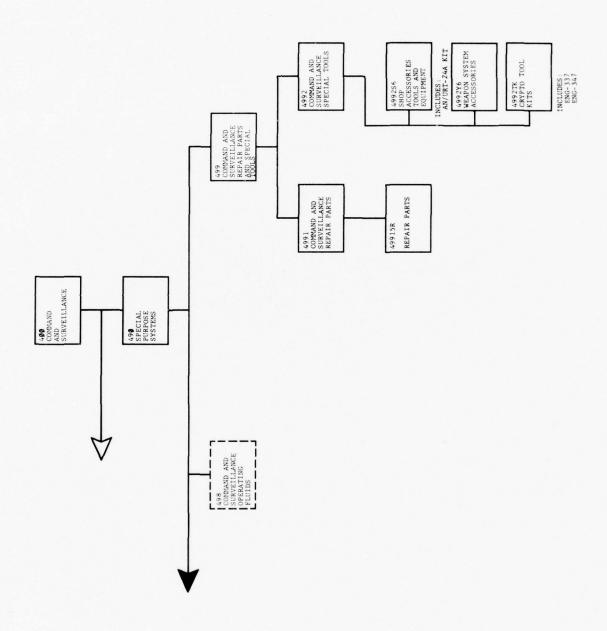


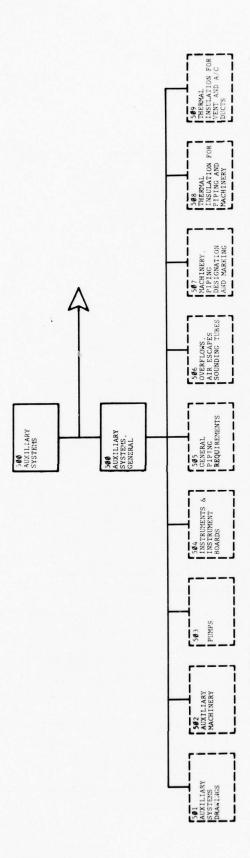


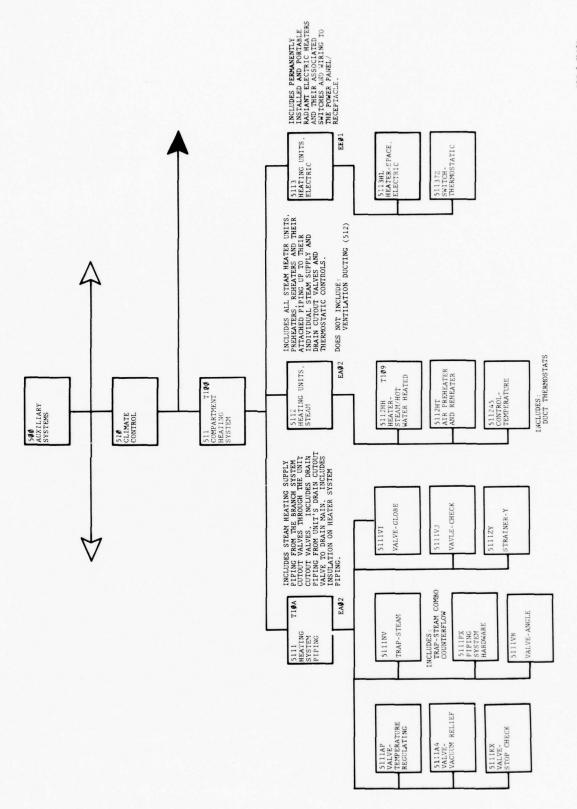


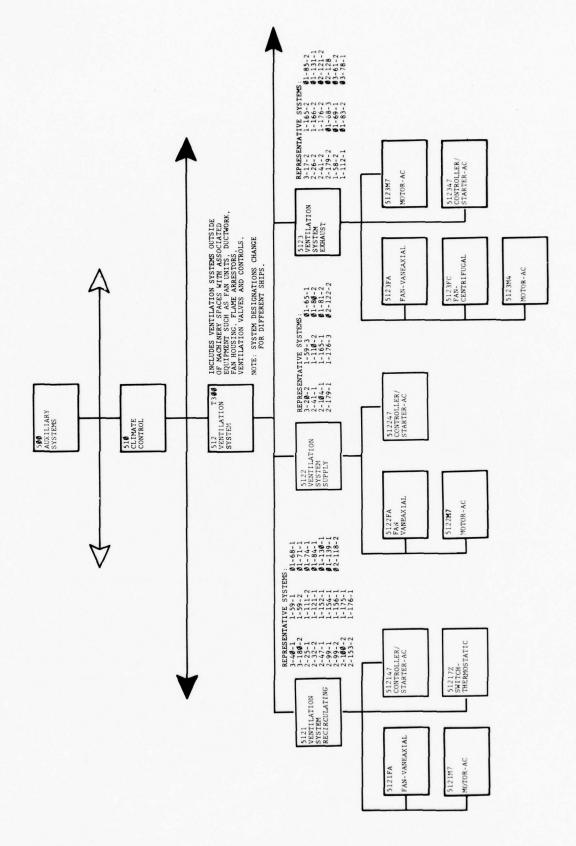


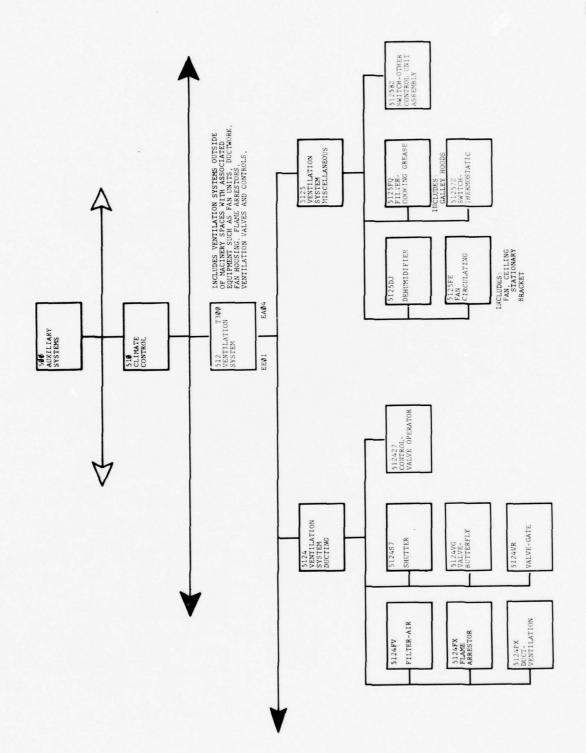


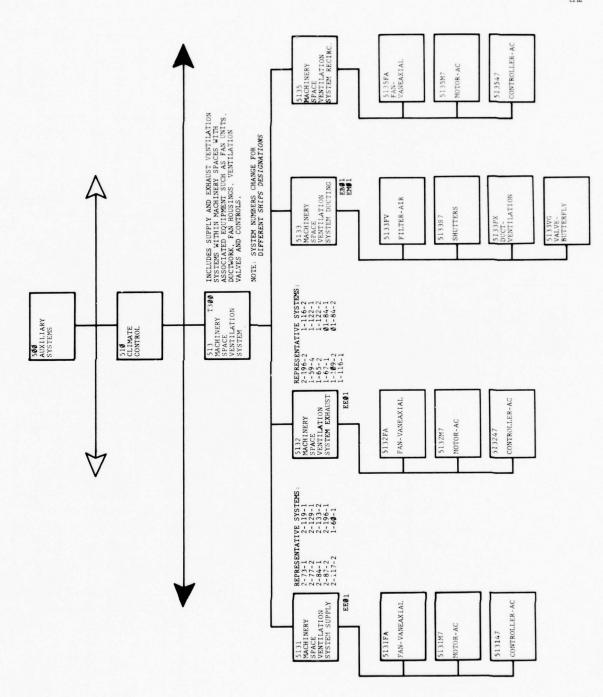


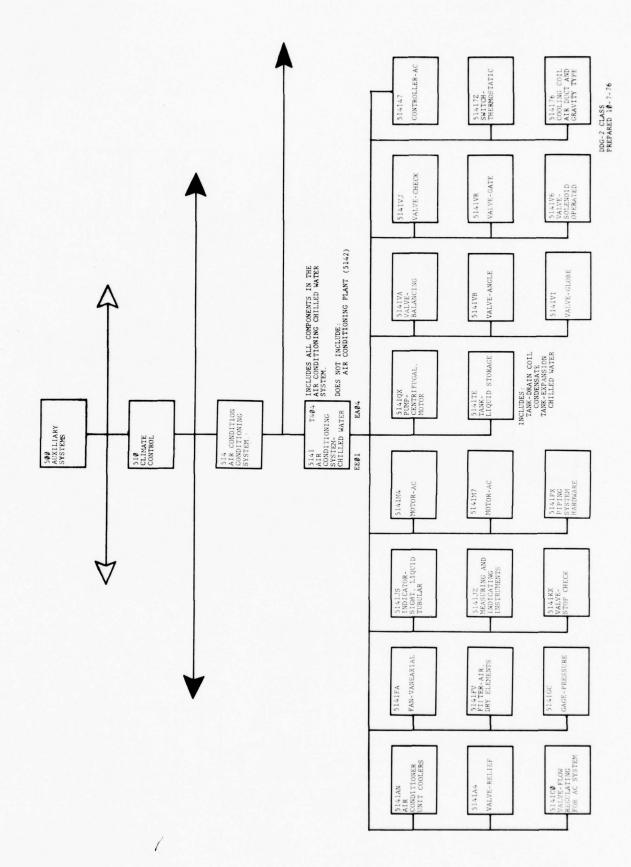


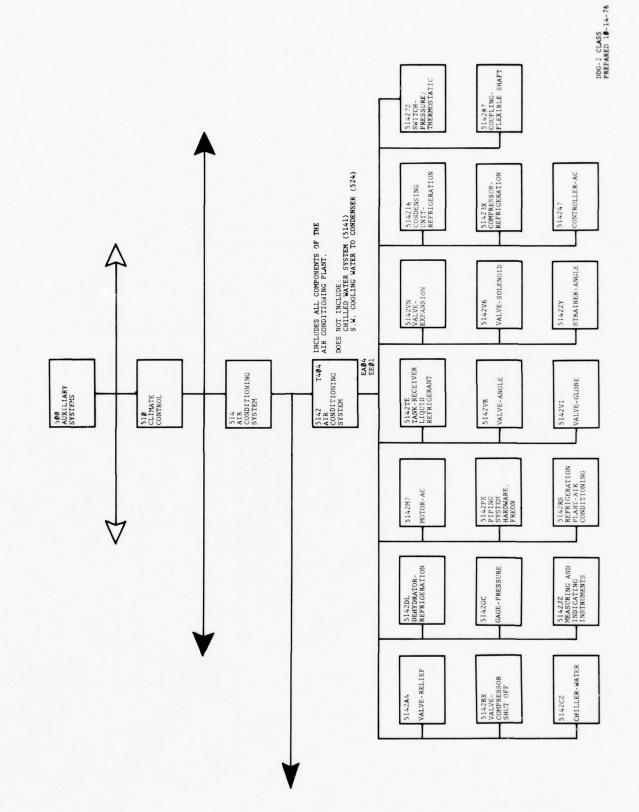


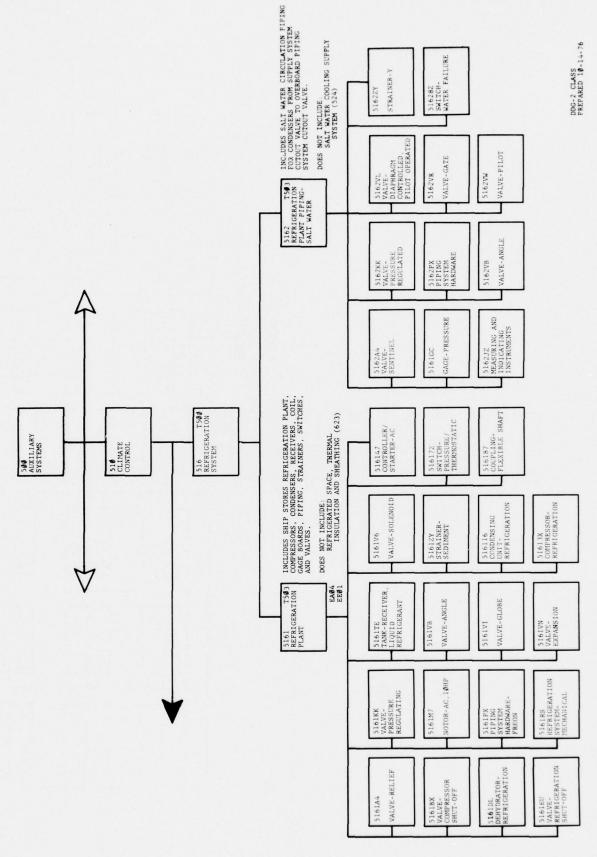




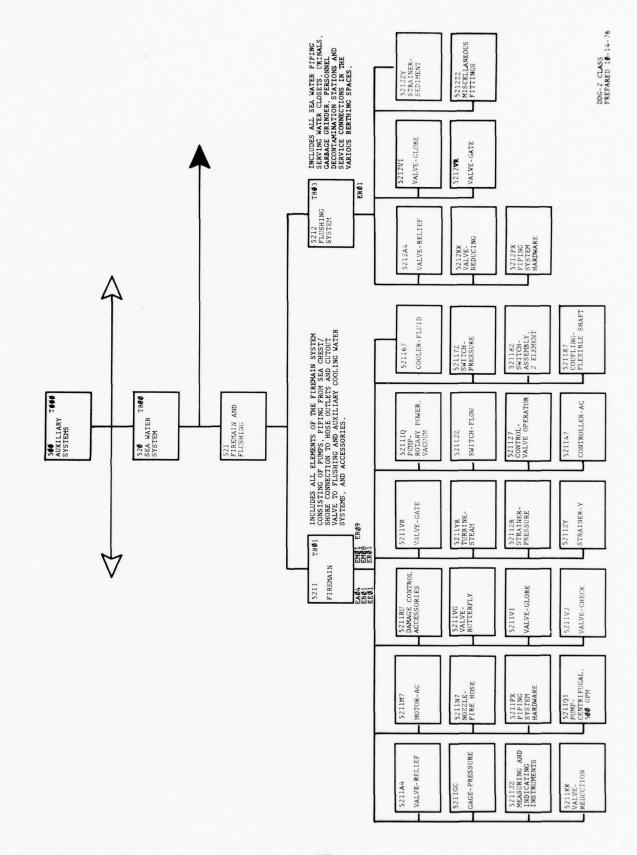




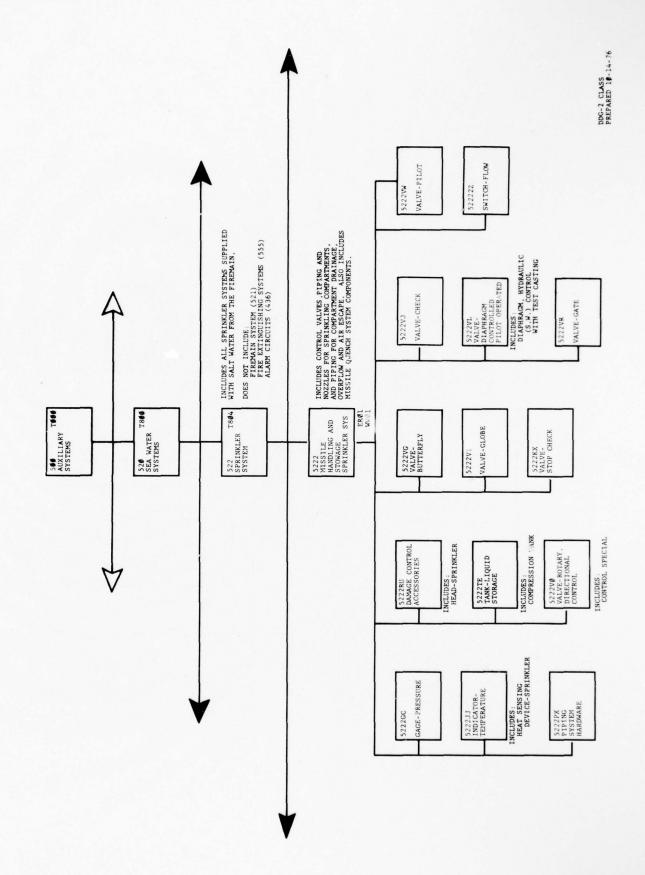


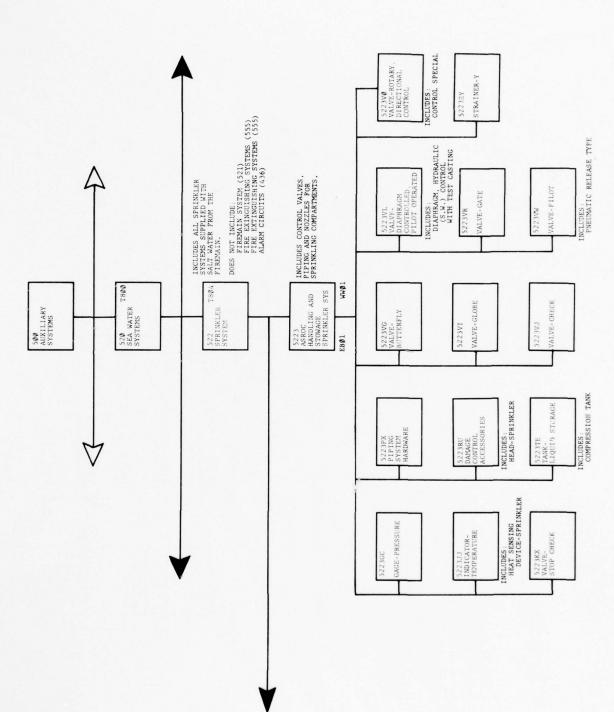


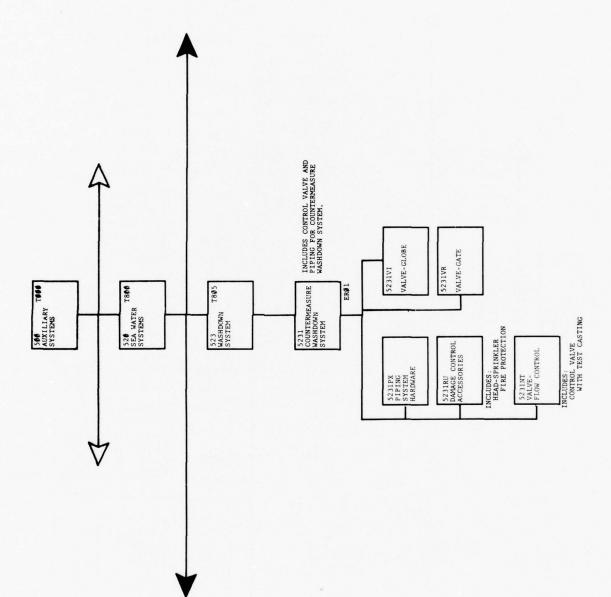
Townson (man)

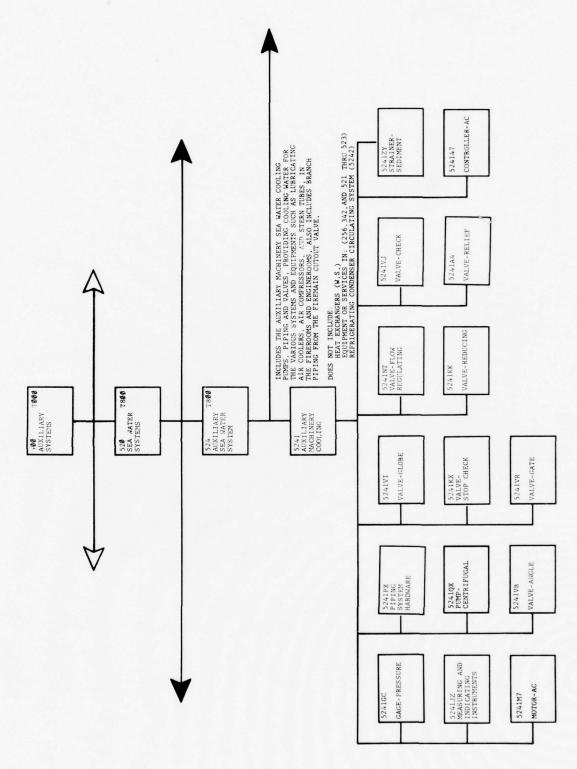


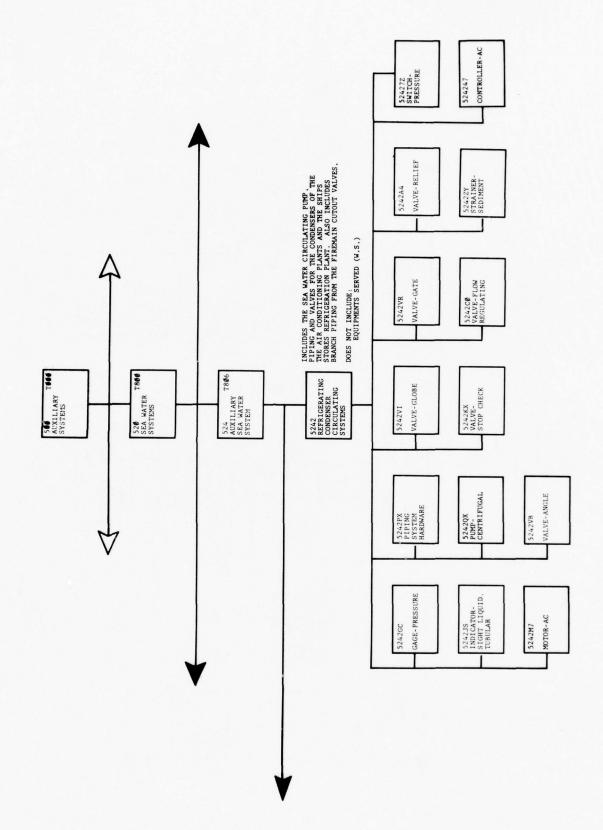
DDG-2 CLASS PREPARED 10-14-76

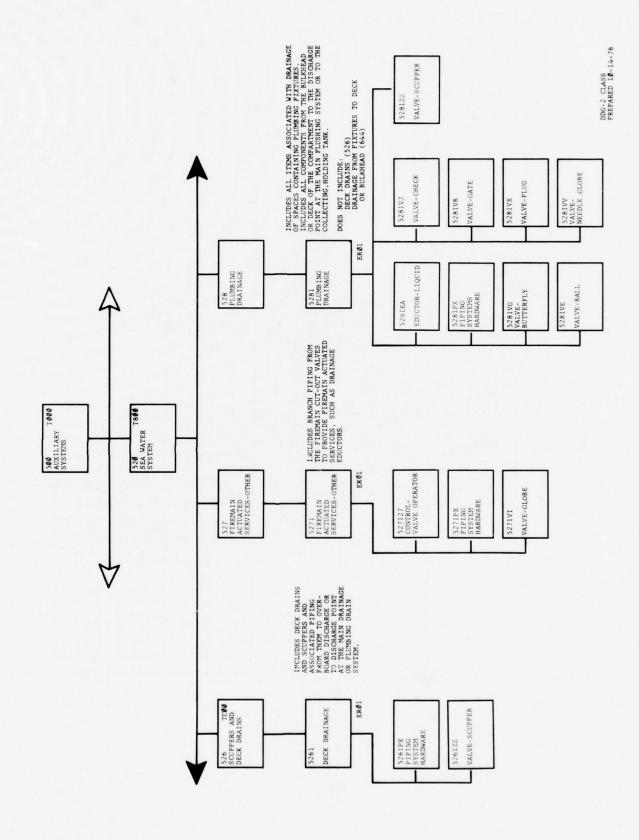


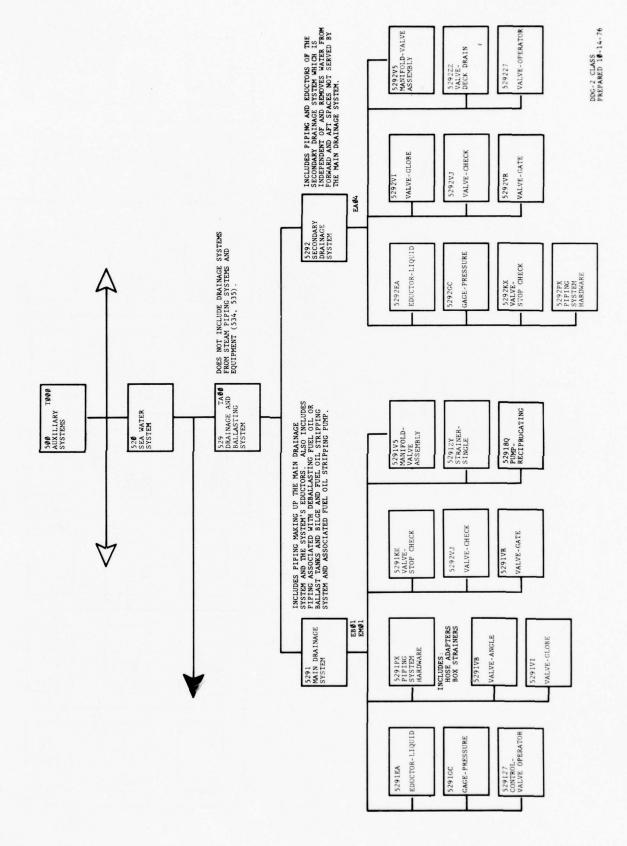


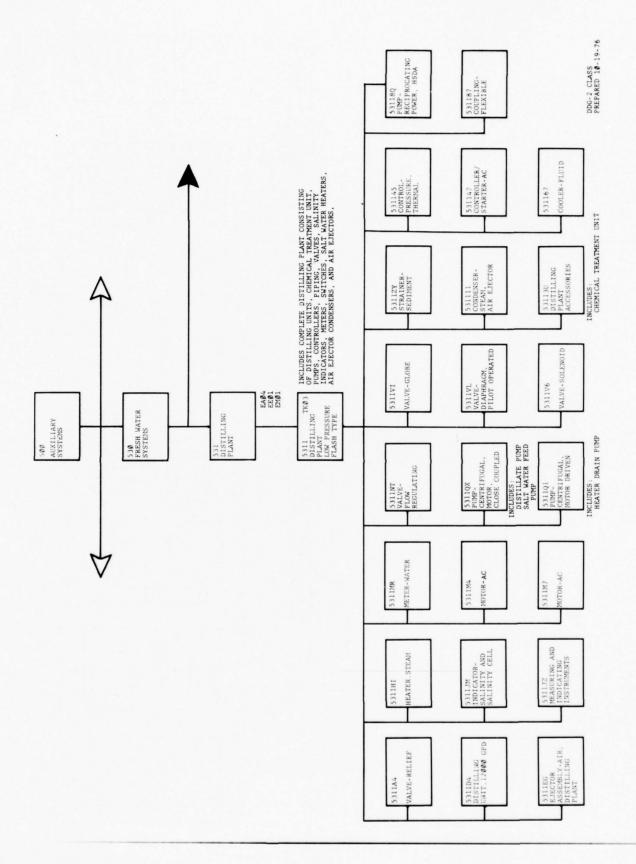


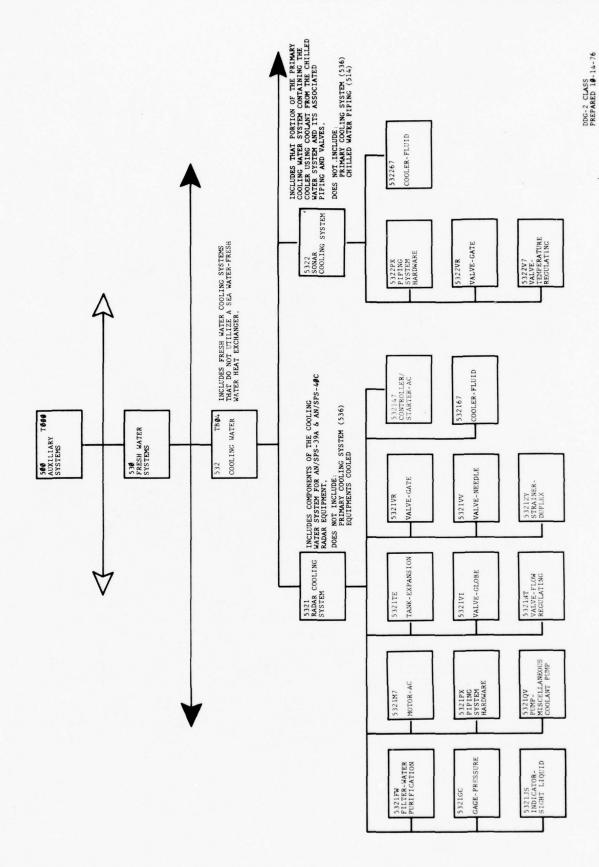


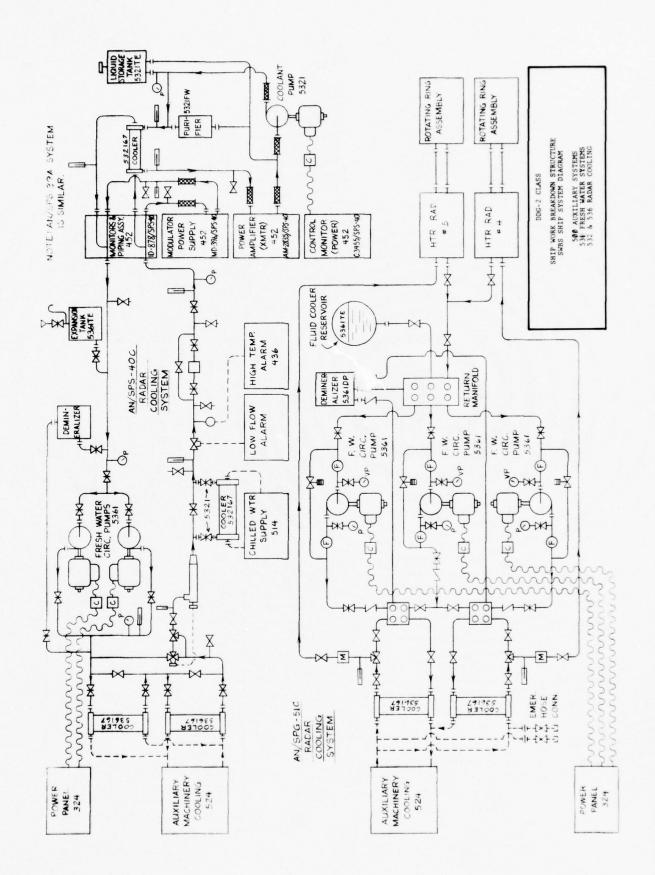


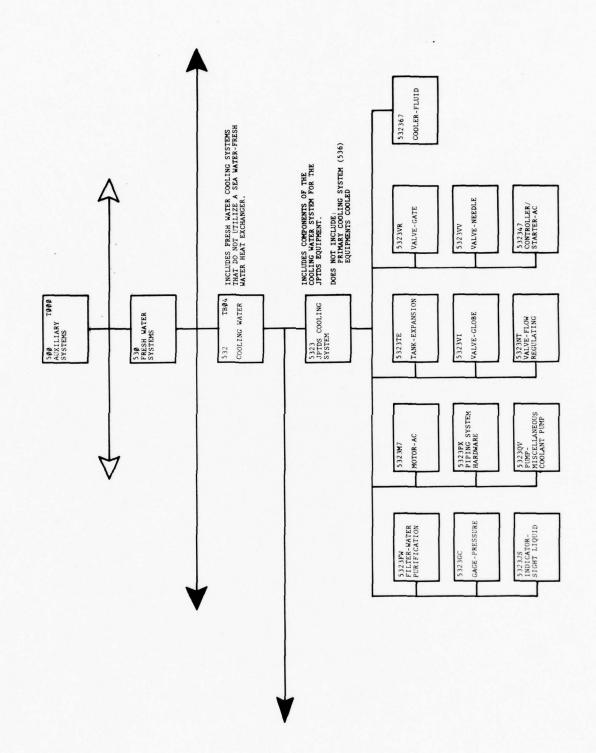


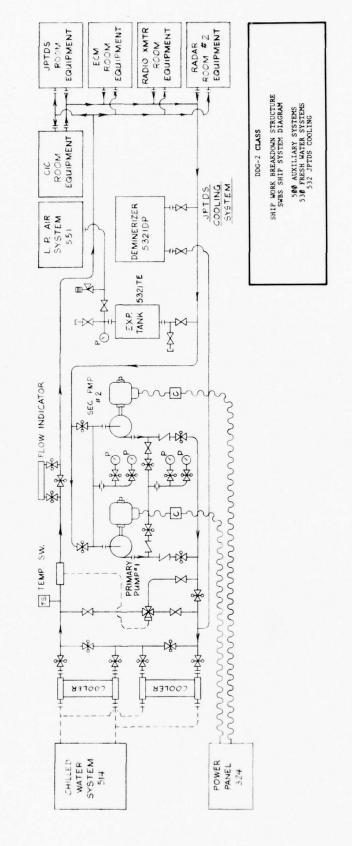


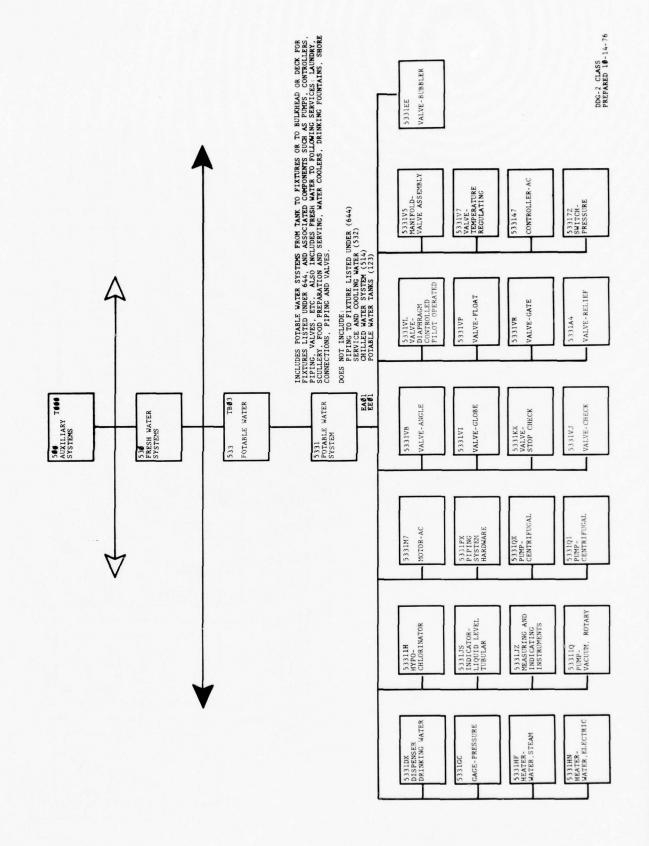


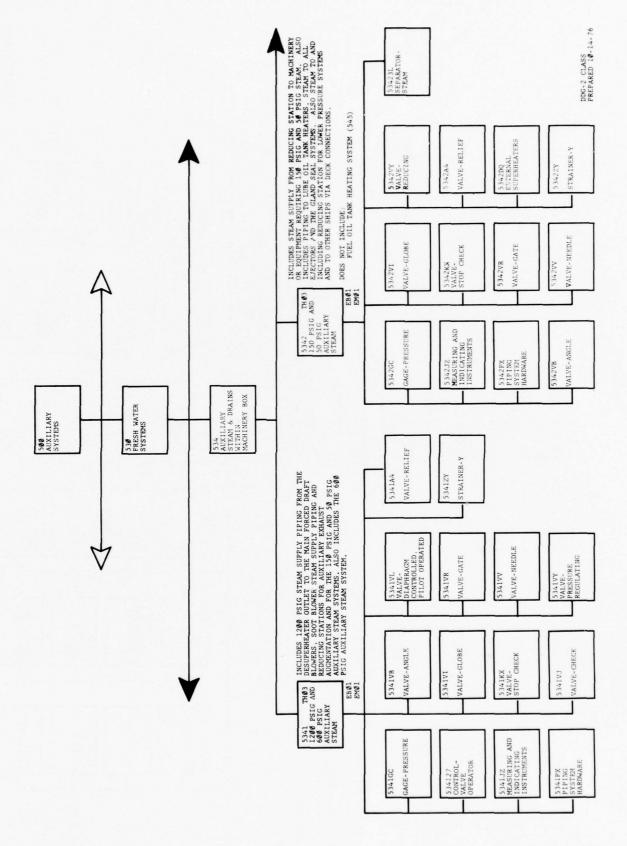




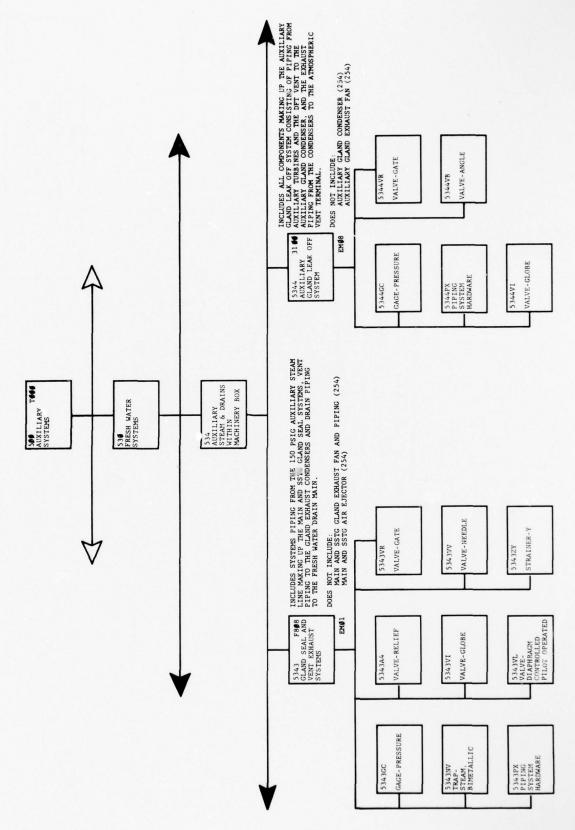


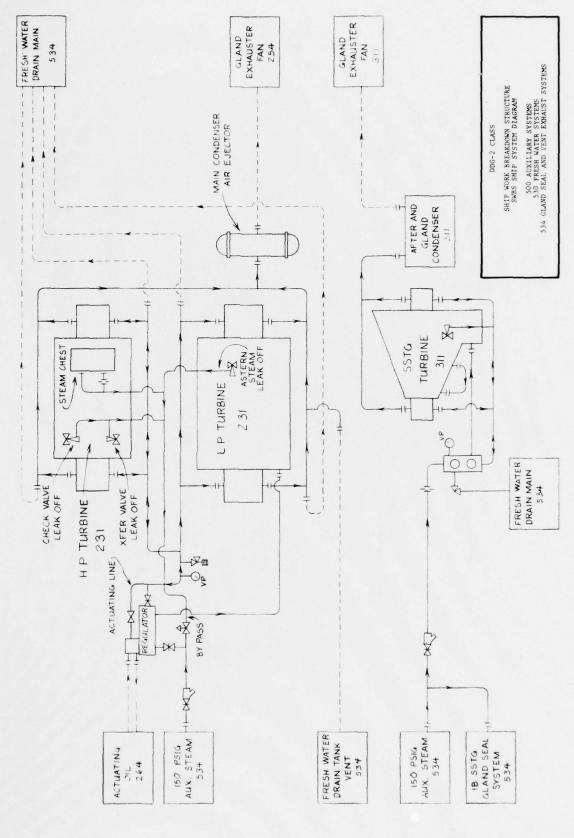


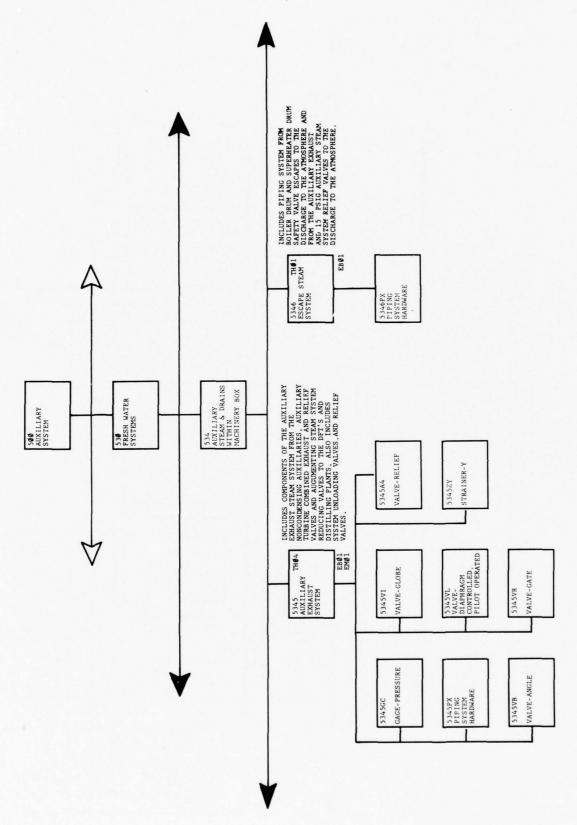


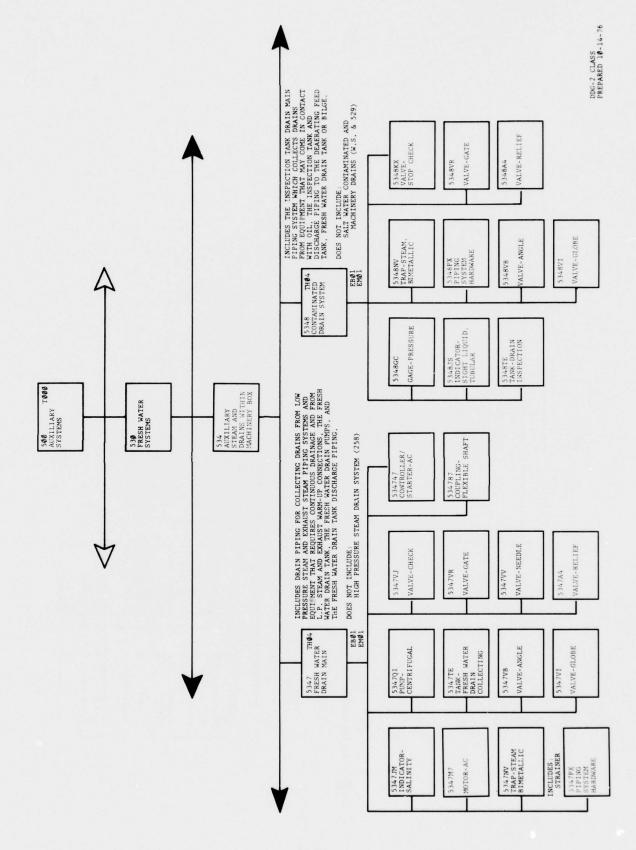


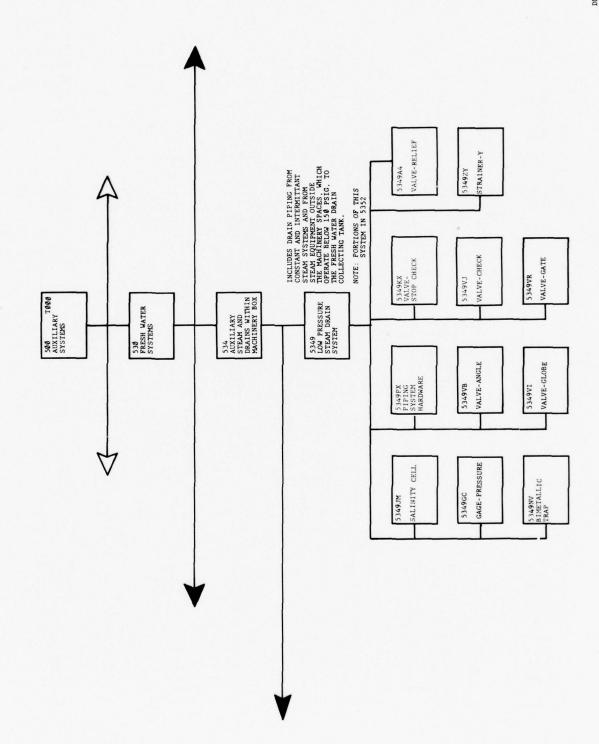
1!

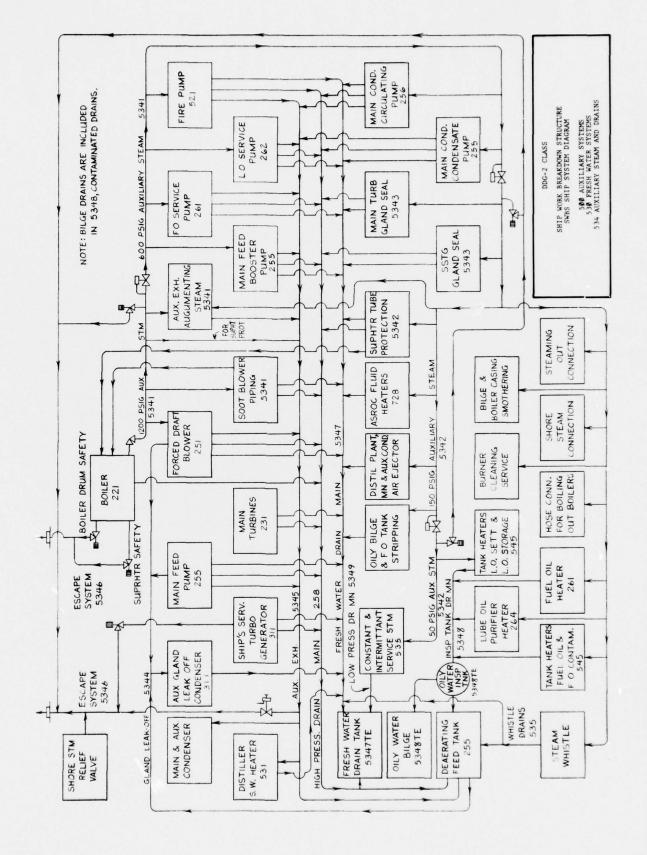


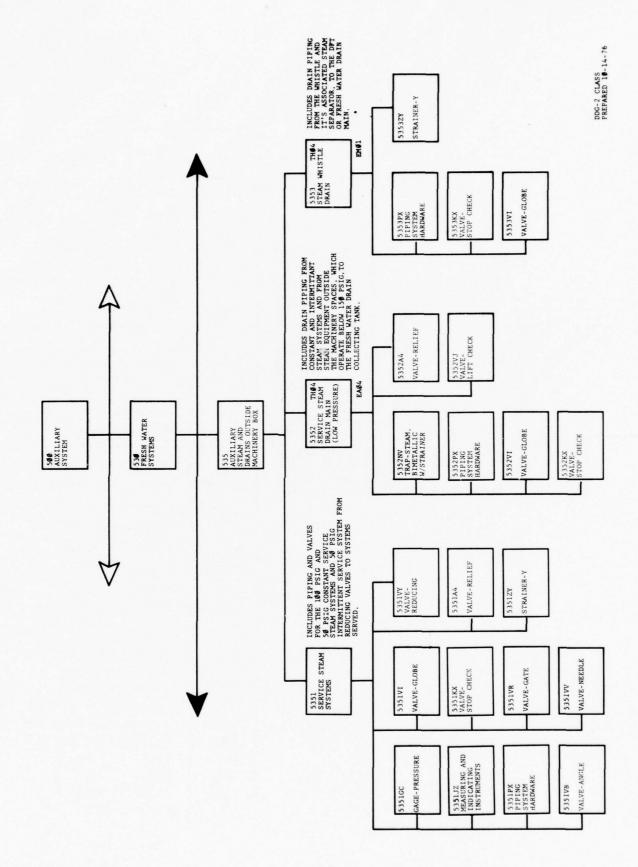


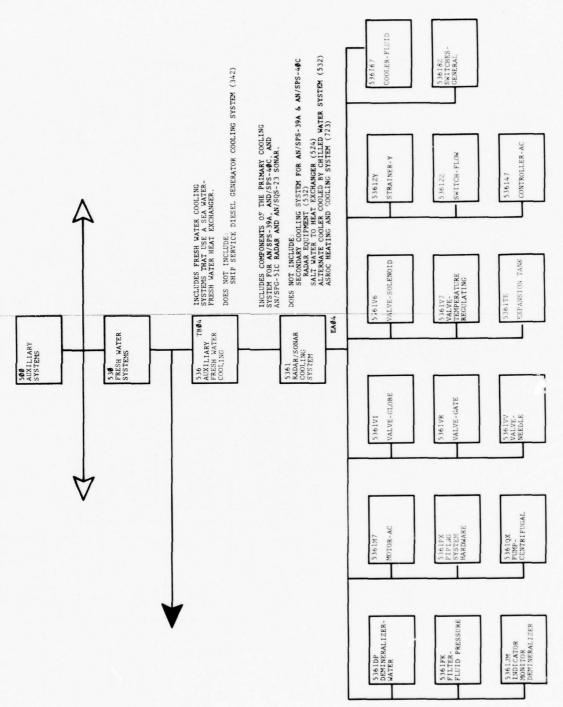


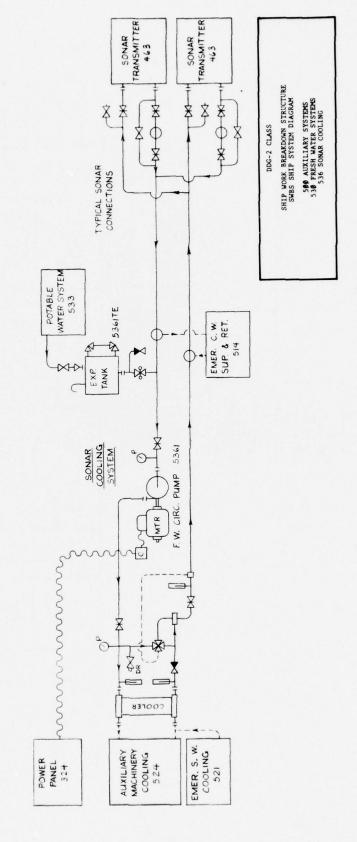


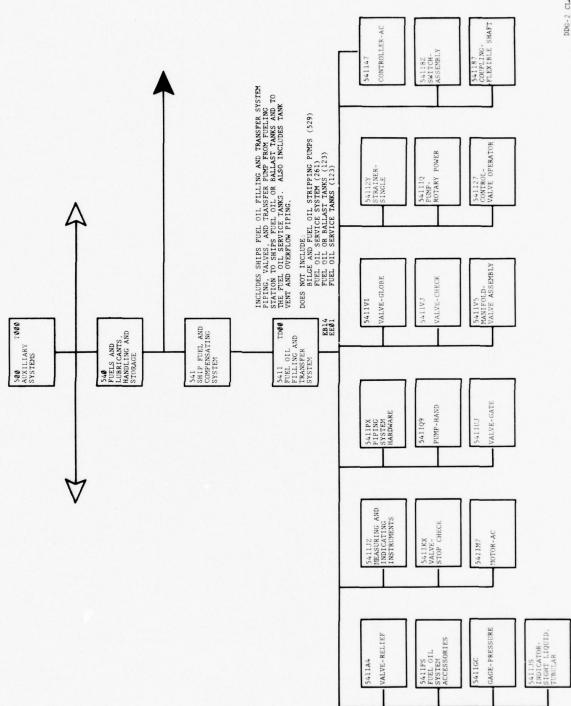


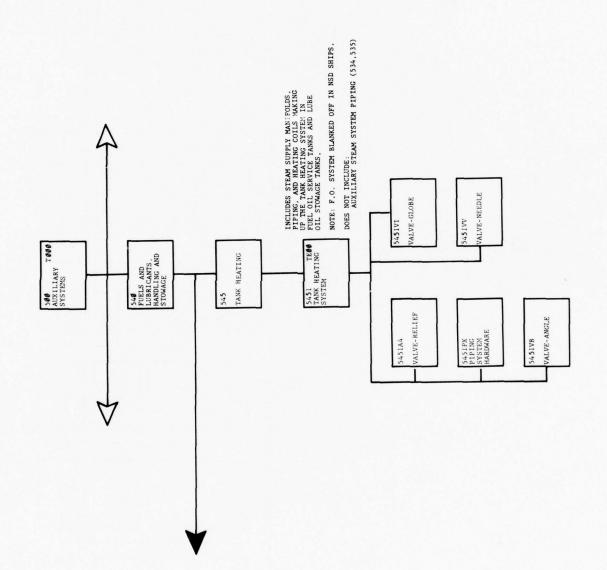


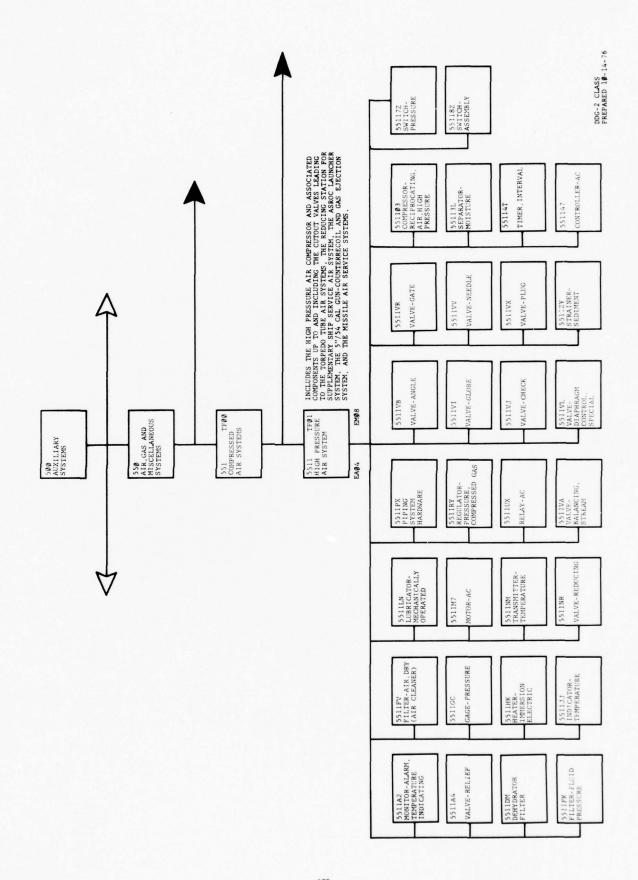


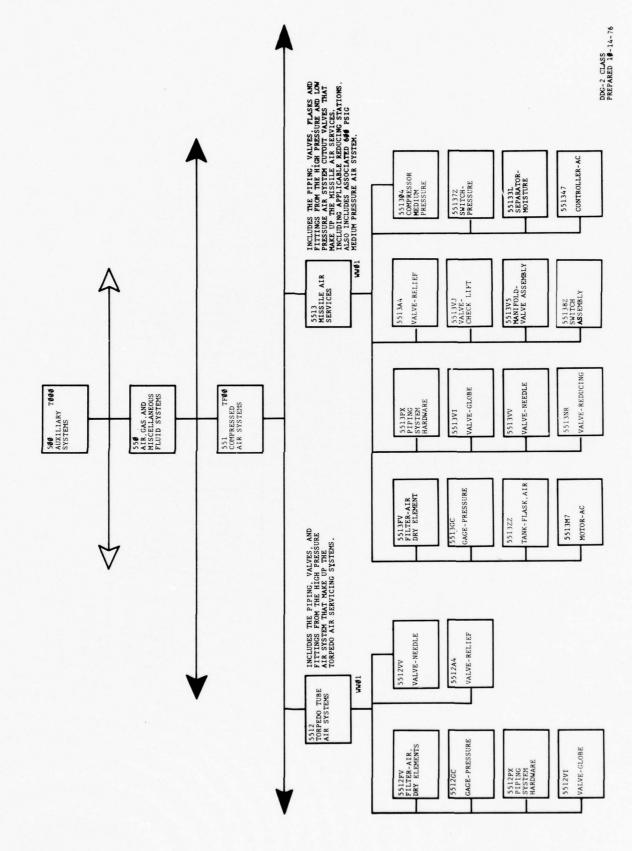


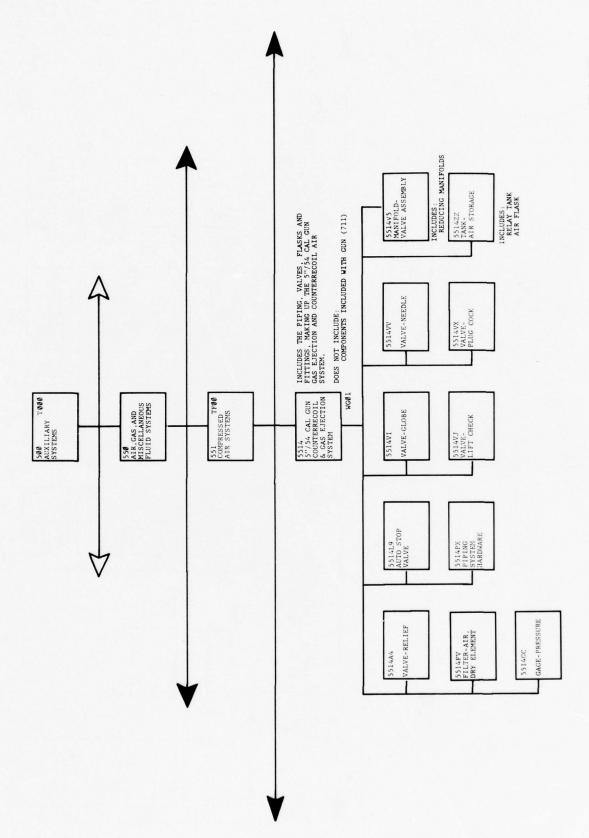


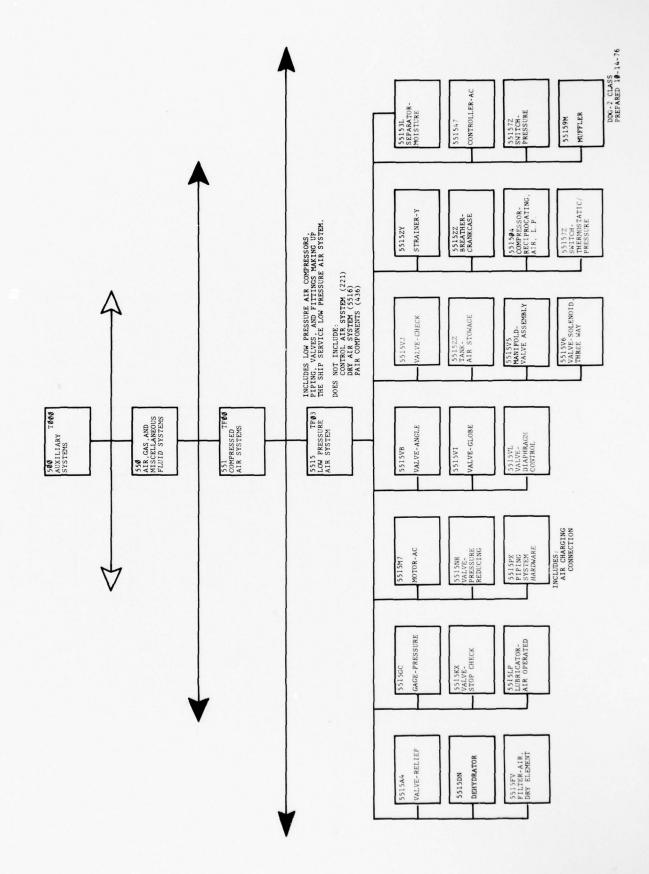


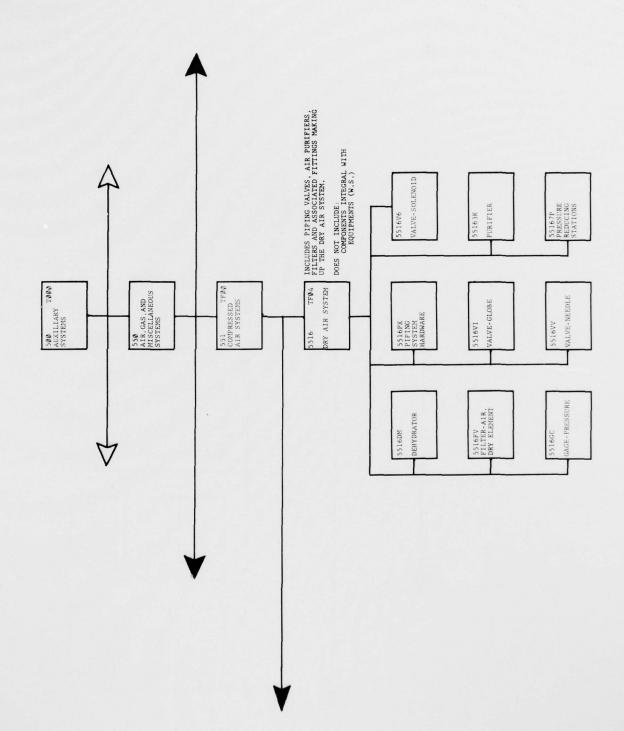


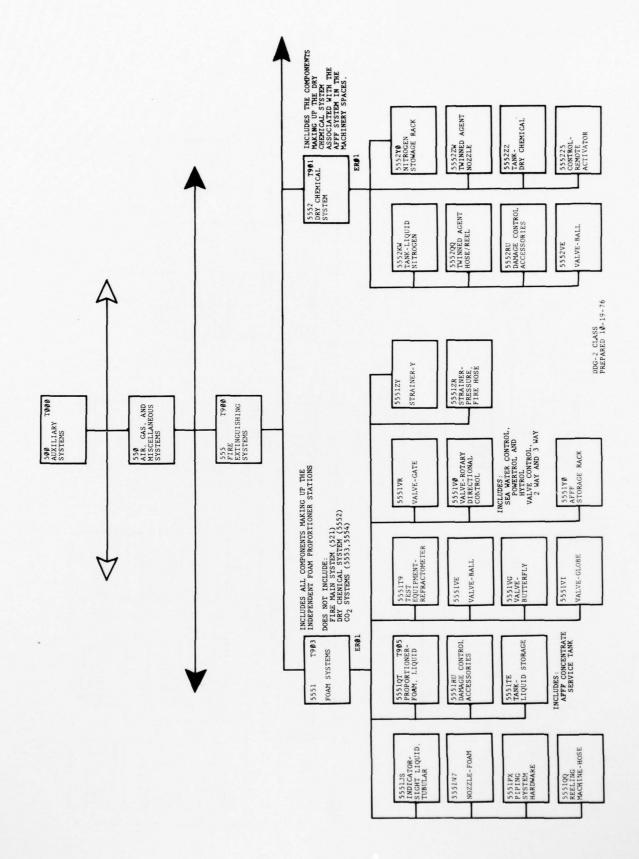


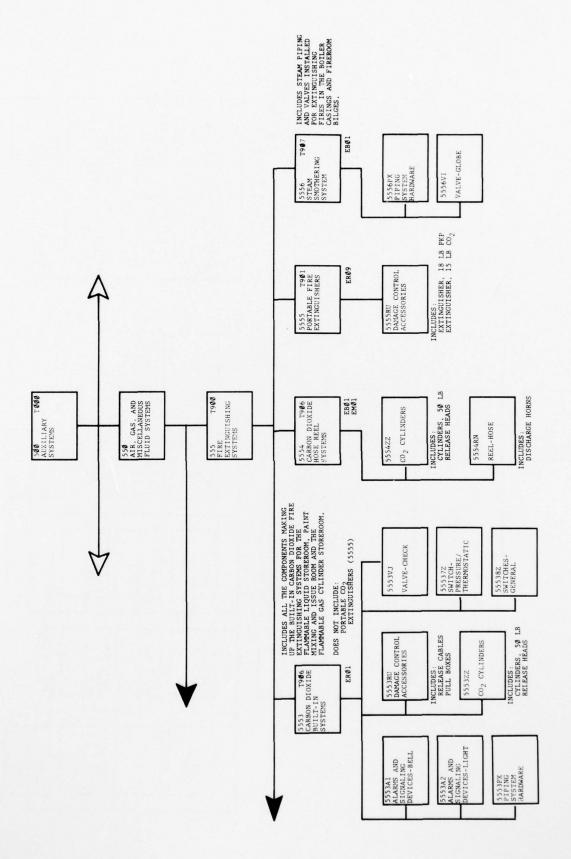


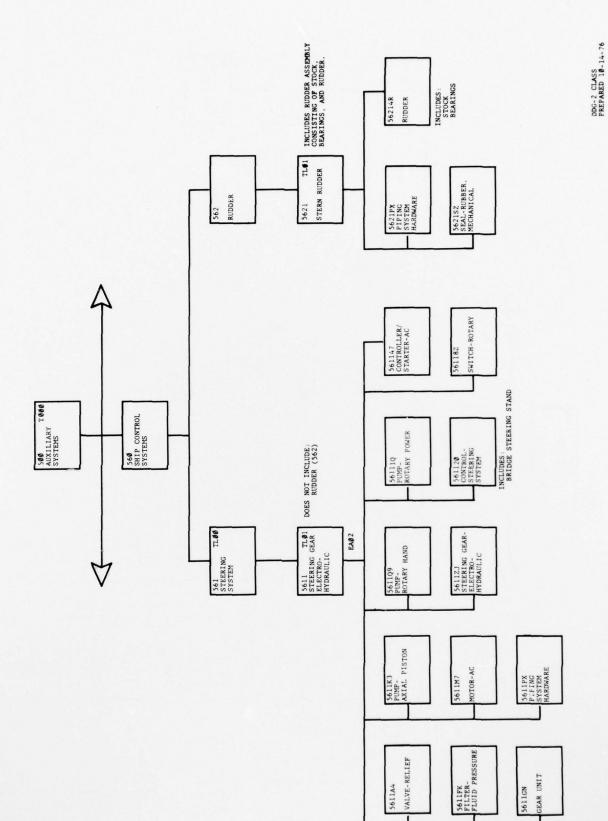


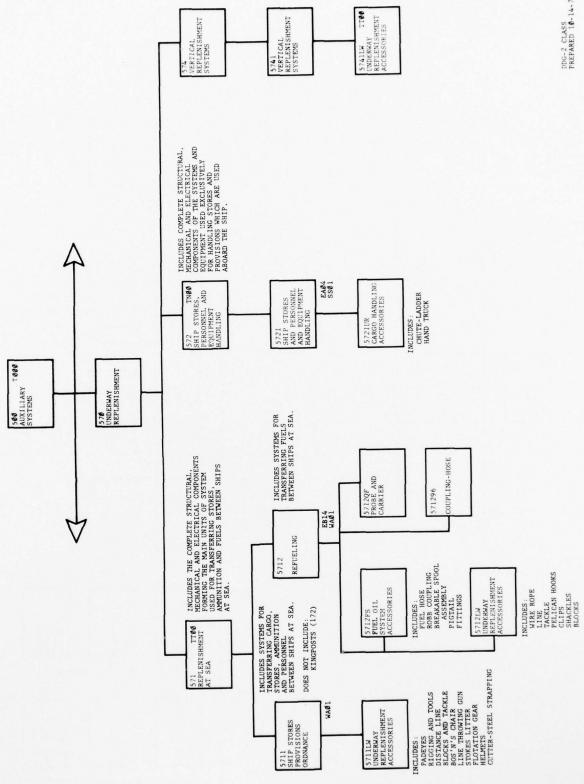


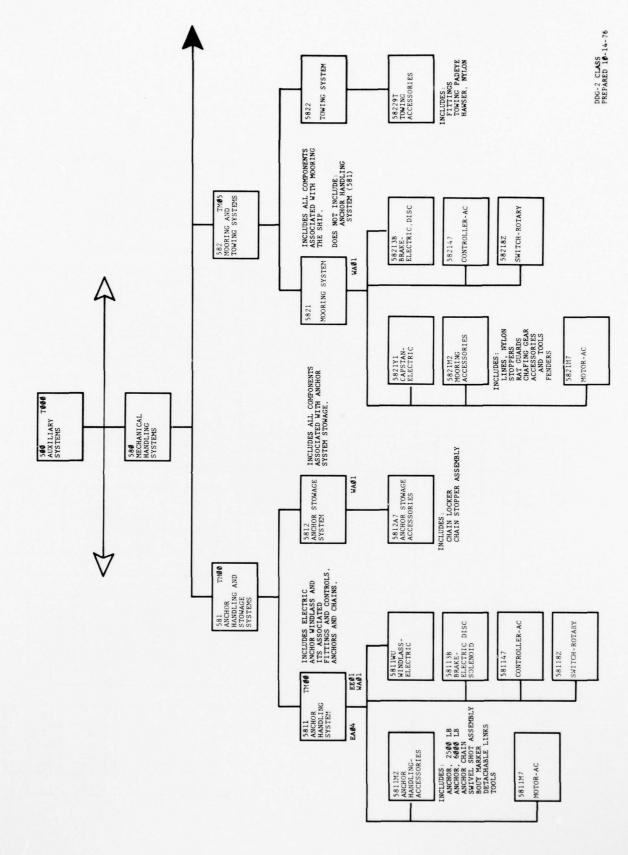


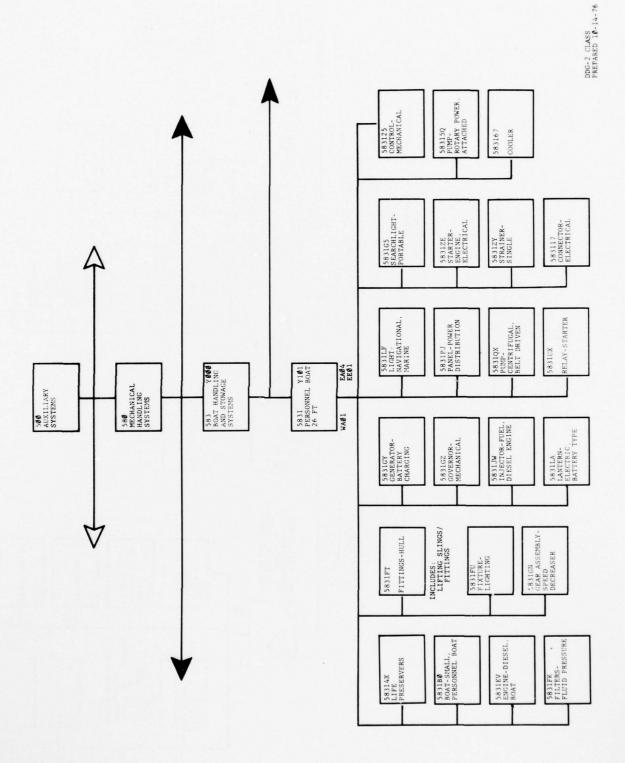


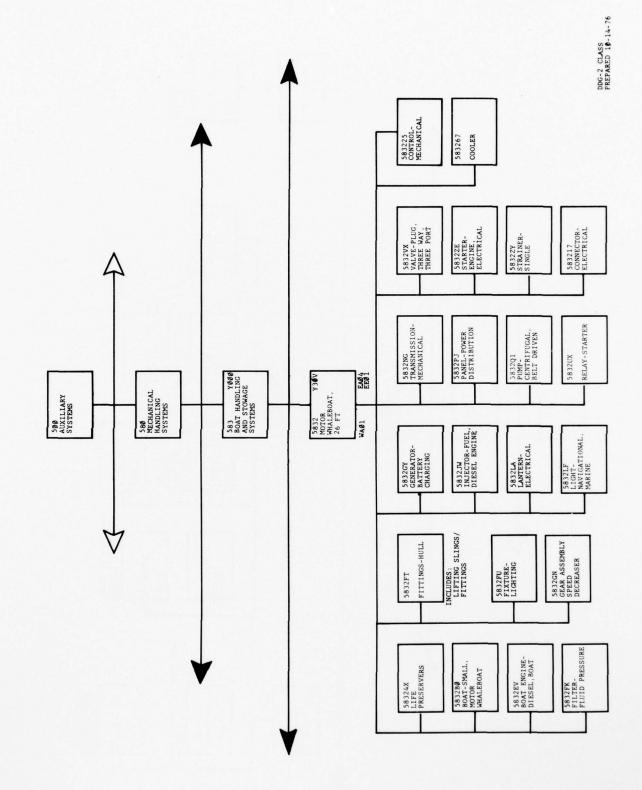


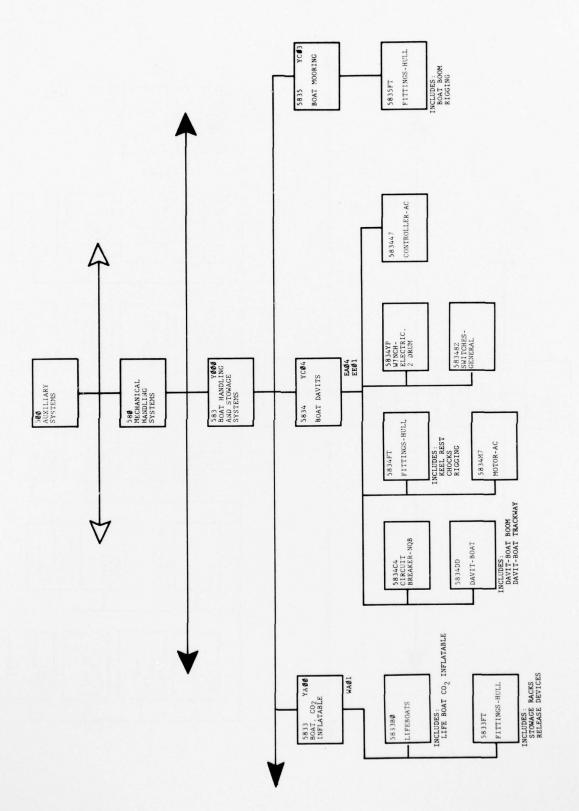


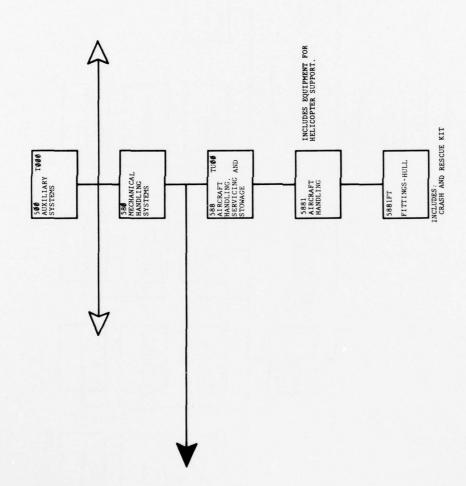


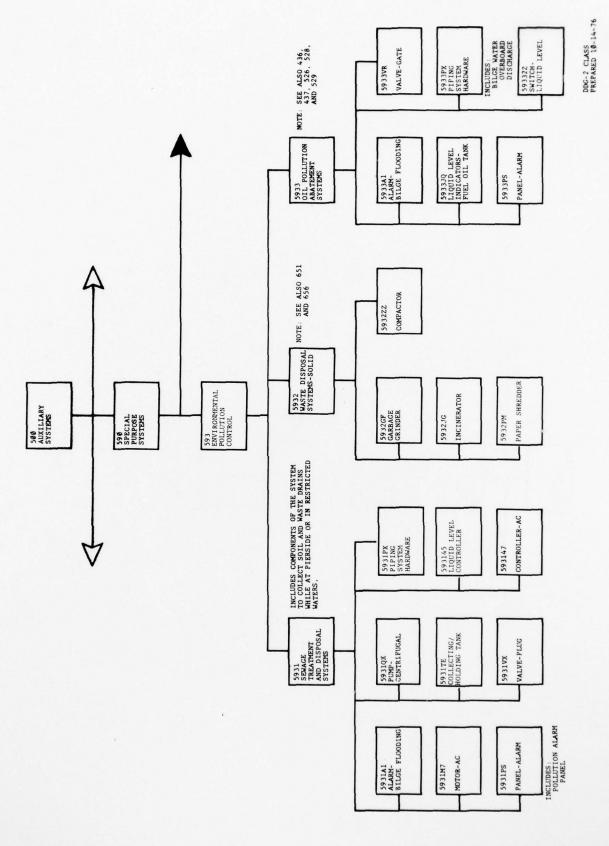


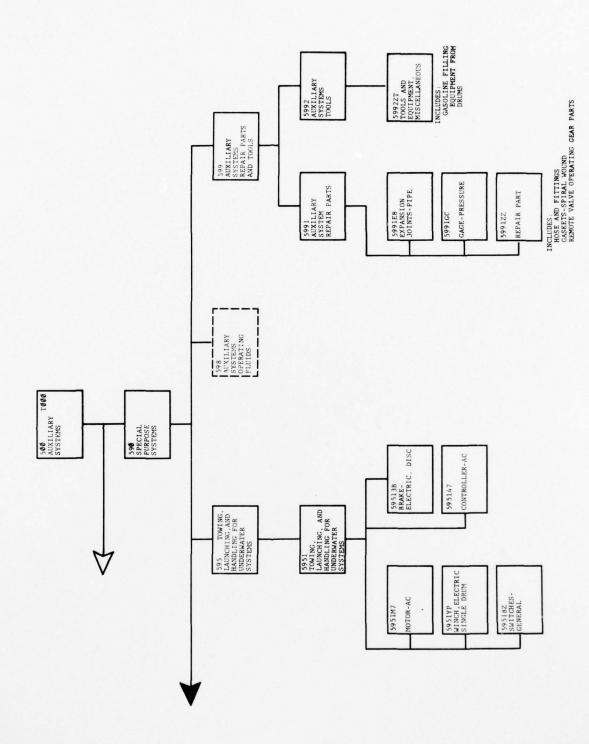






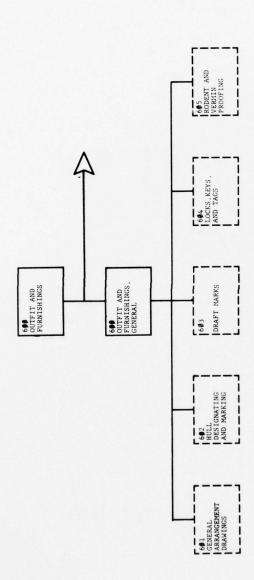


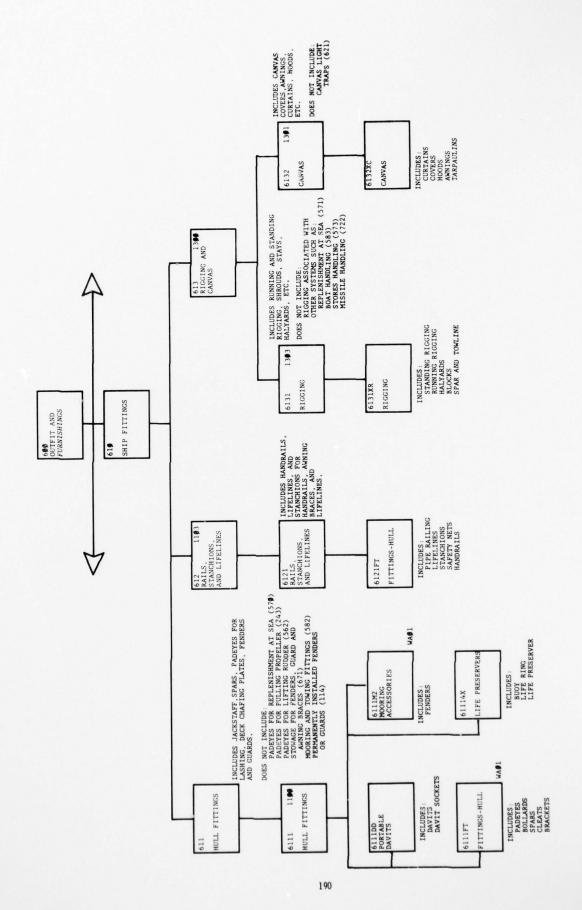


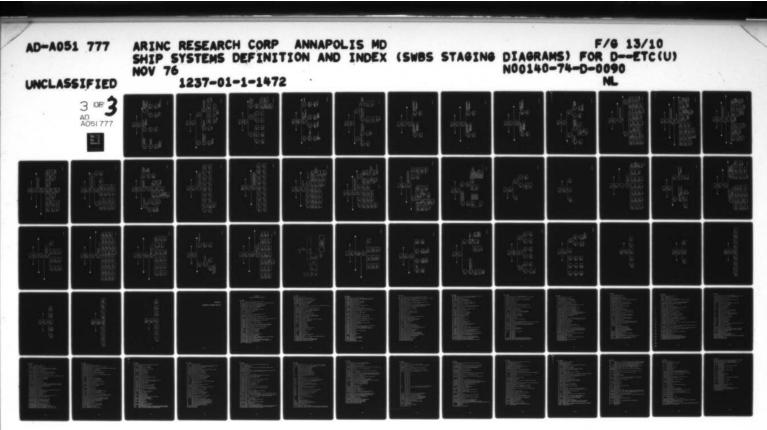


DDG-2 CLASS PREPARED 10-14-76

187/188

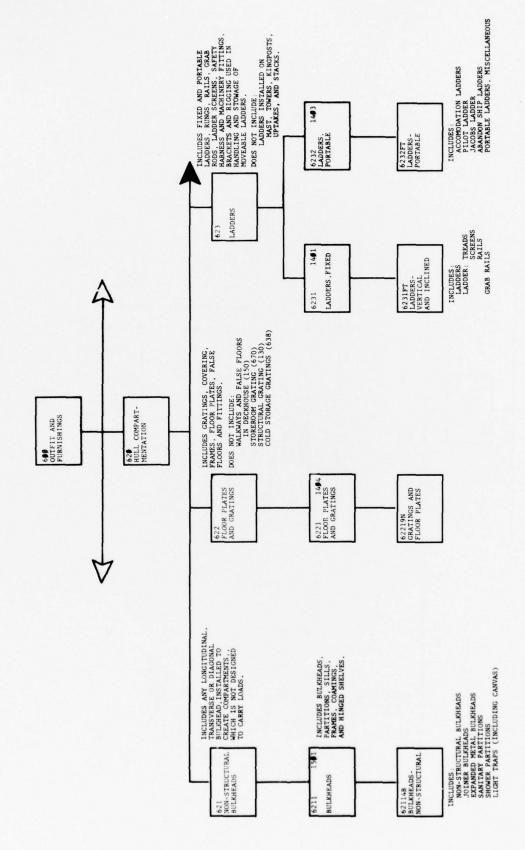




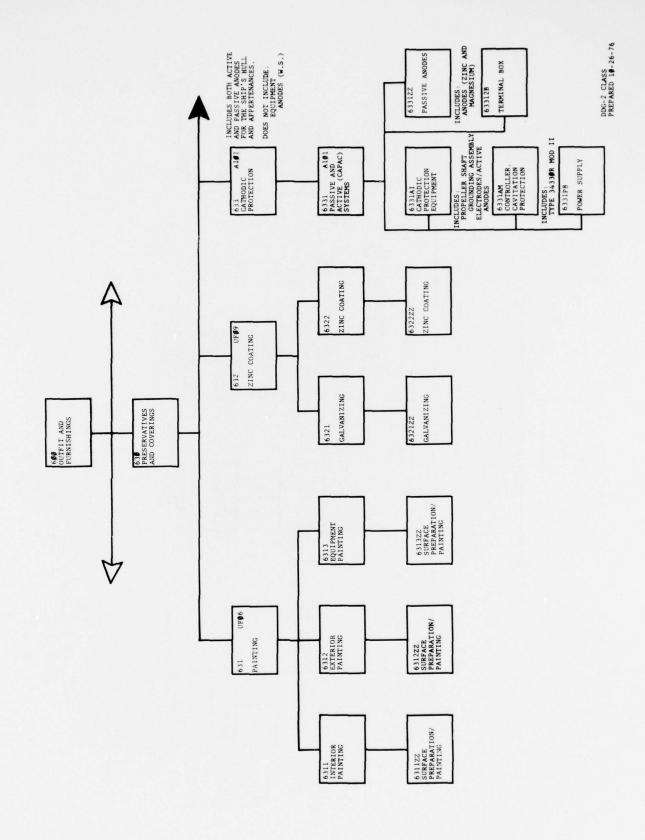


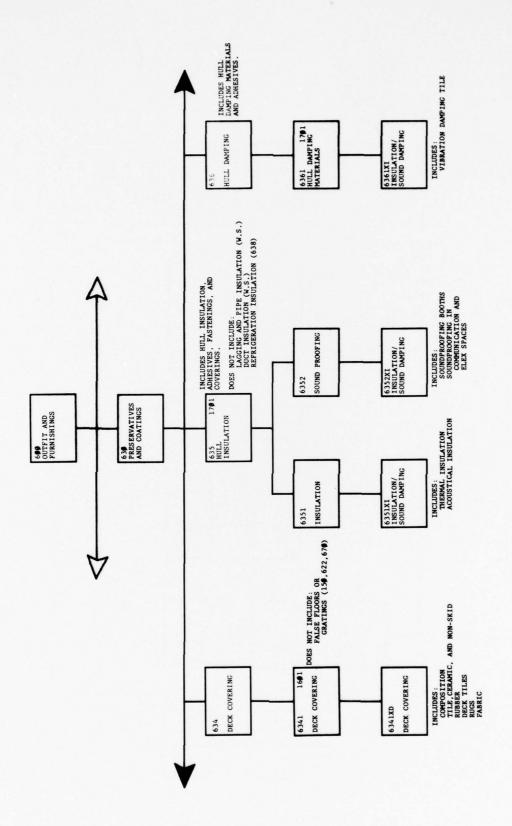
DATE FILMED 5-78

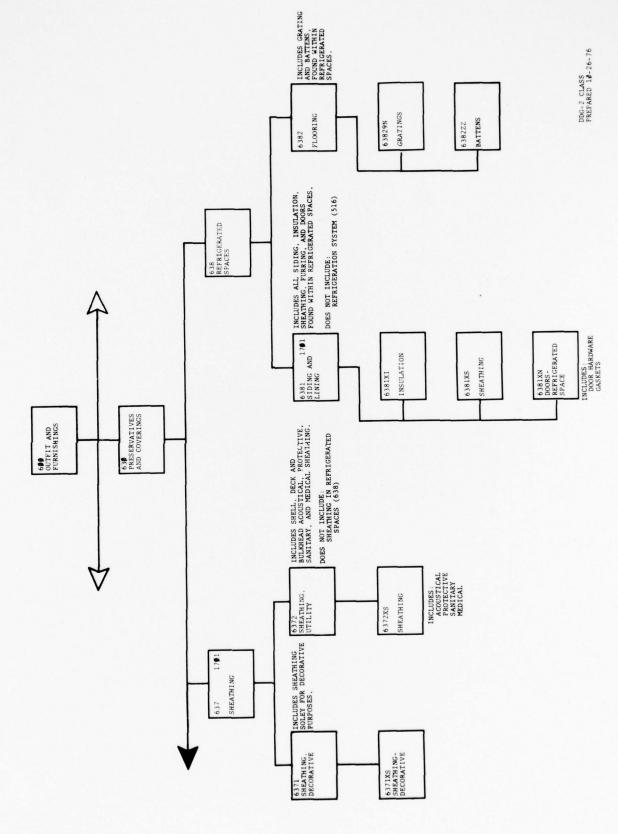


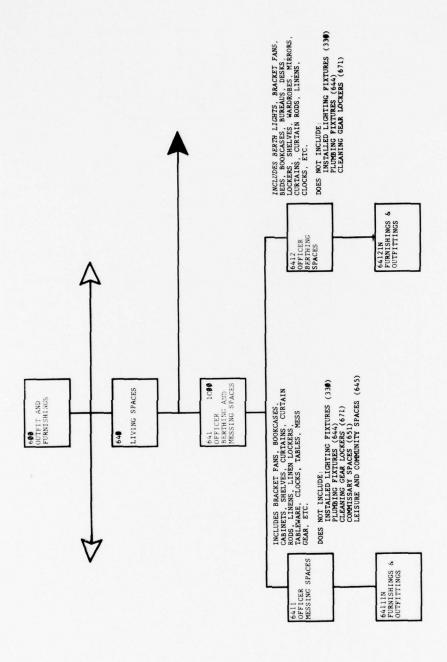


DDG-2 CLASS PREPARED 10-26-76

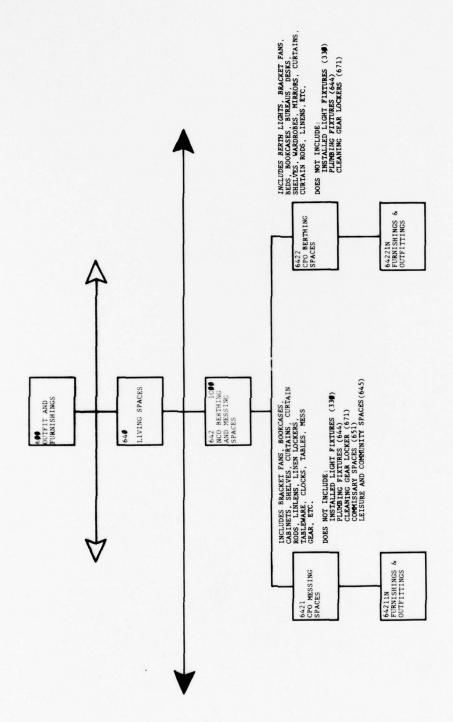




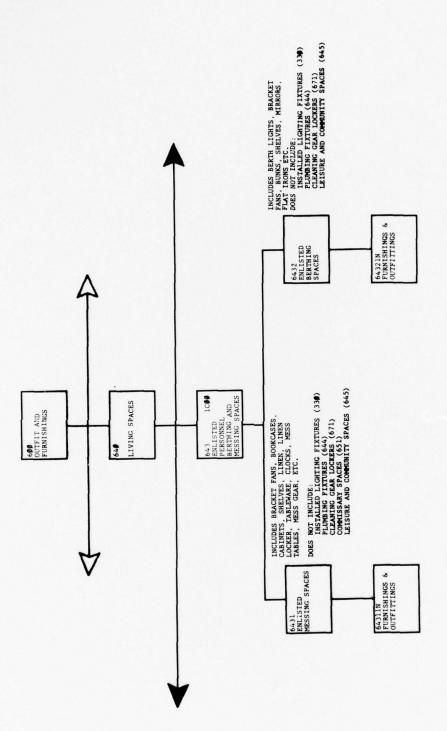




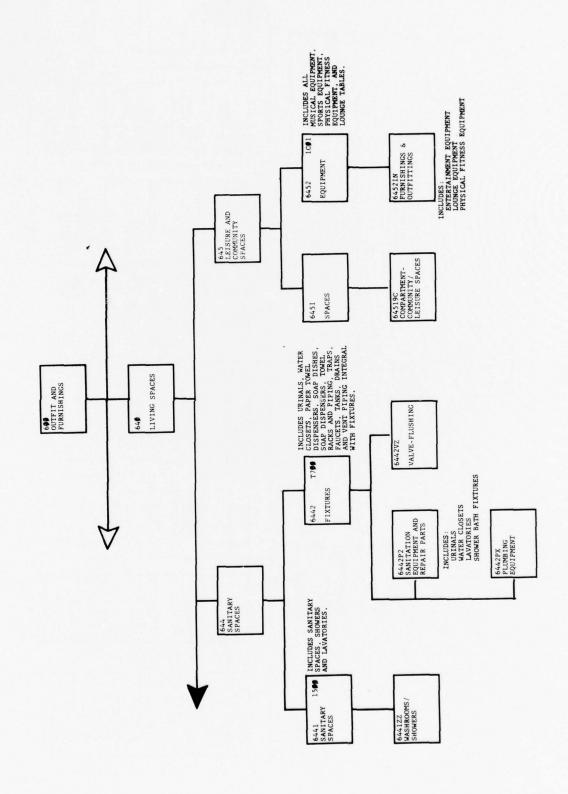
The second secon

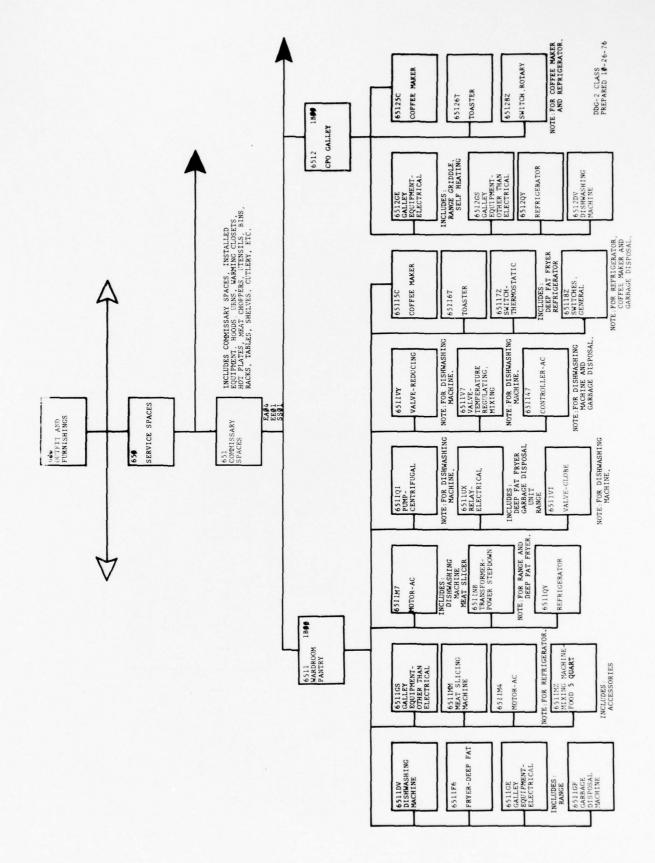


The state of the s

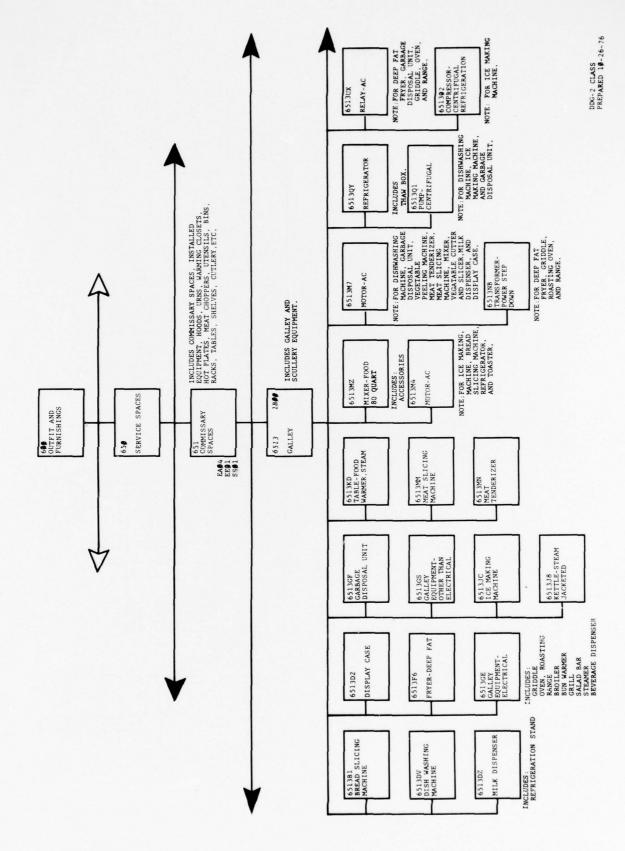


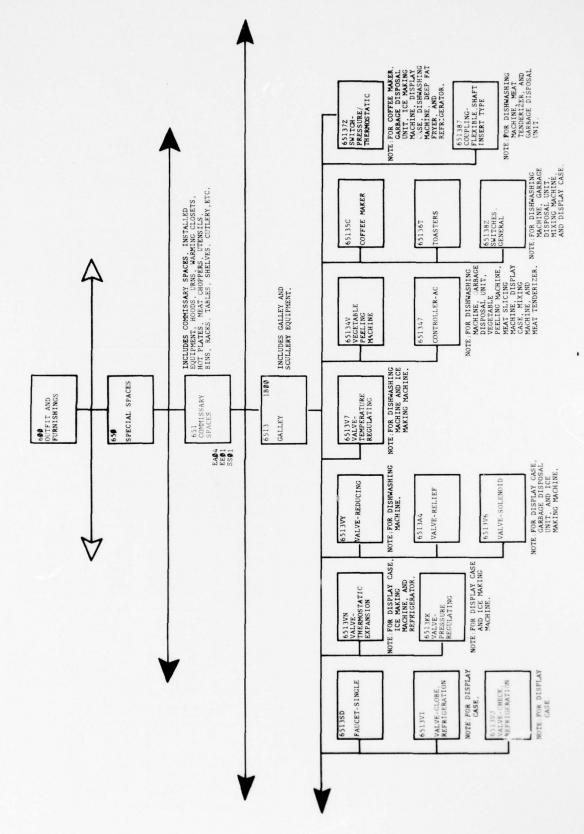
make your training or the same of the same

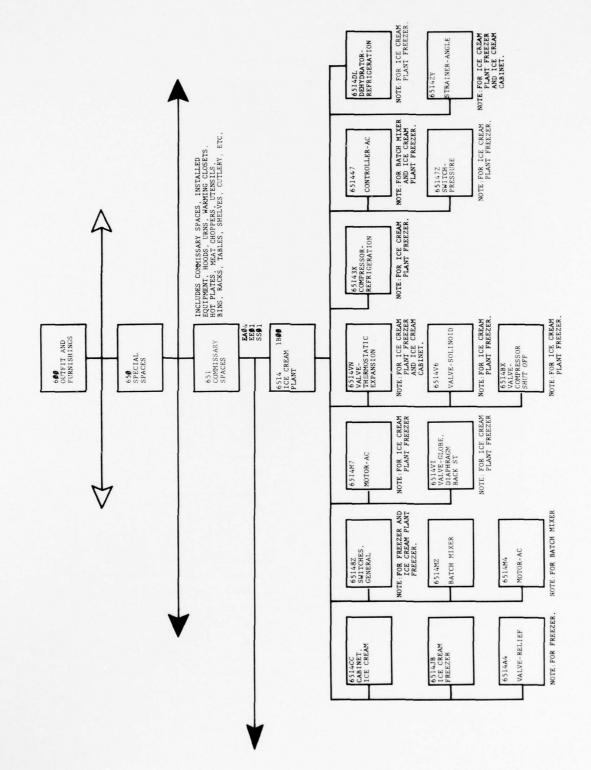


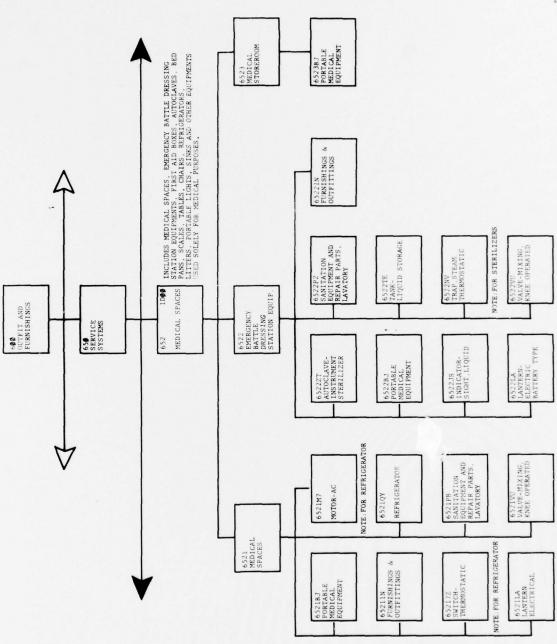


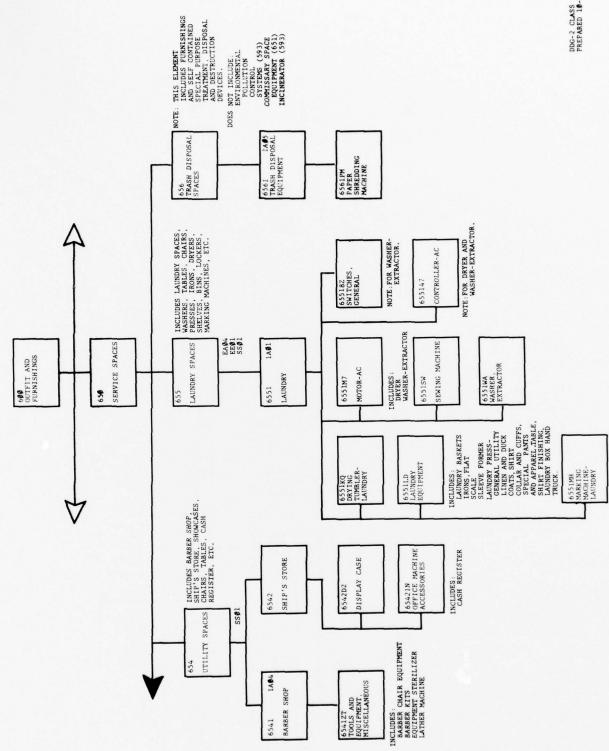
2.

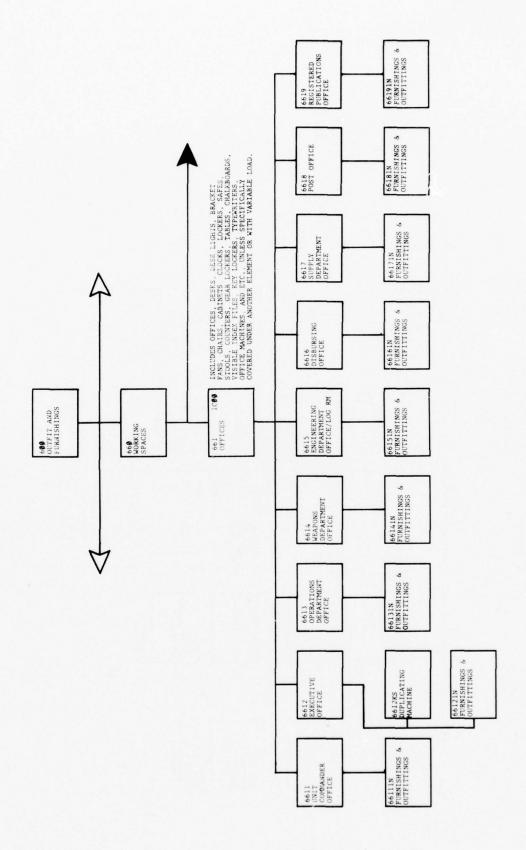


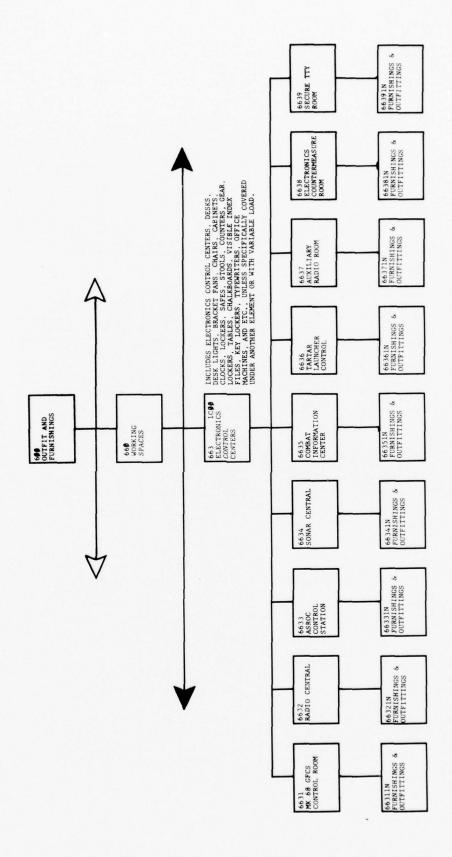


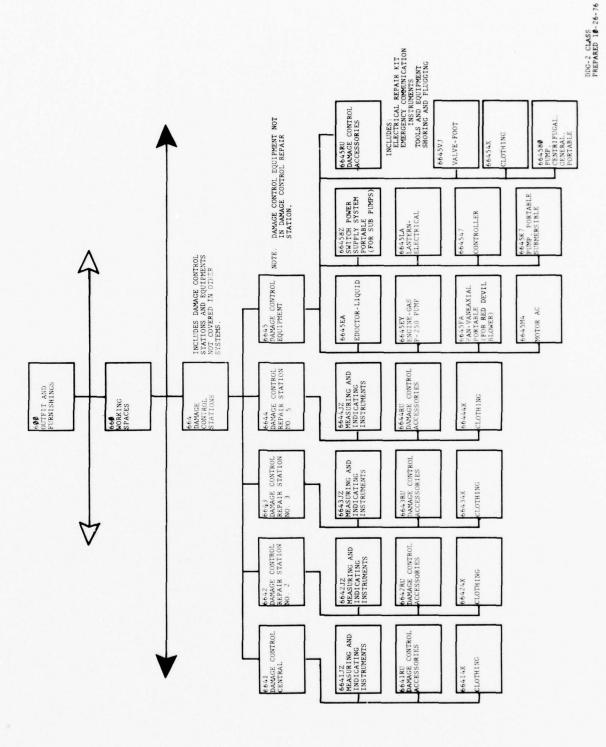


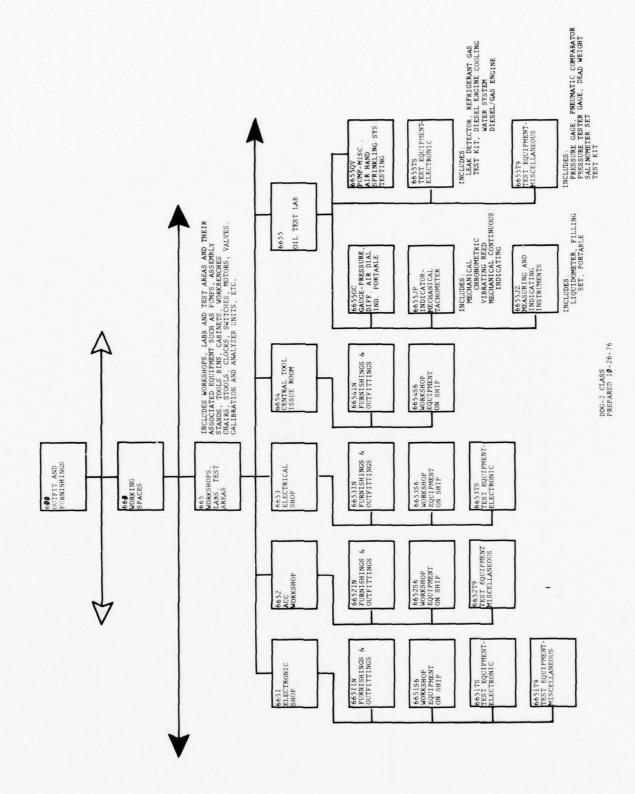


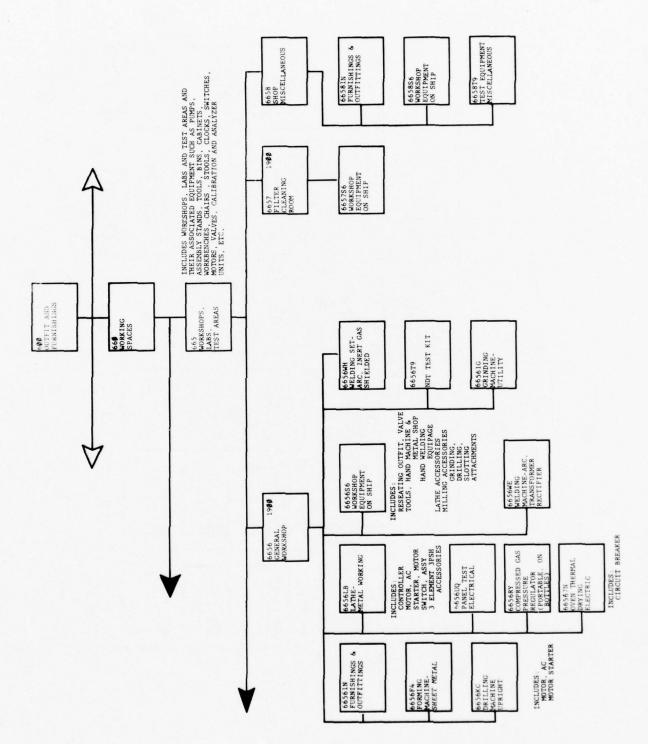




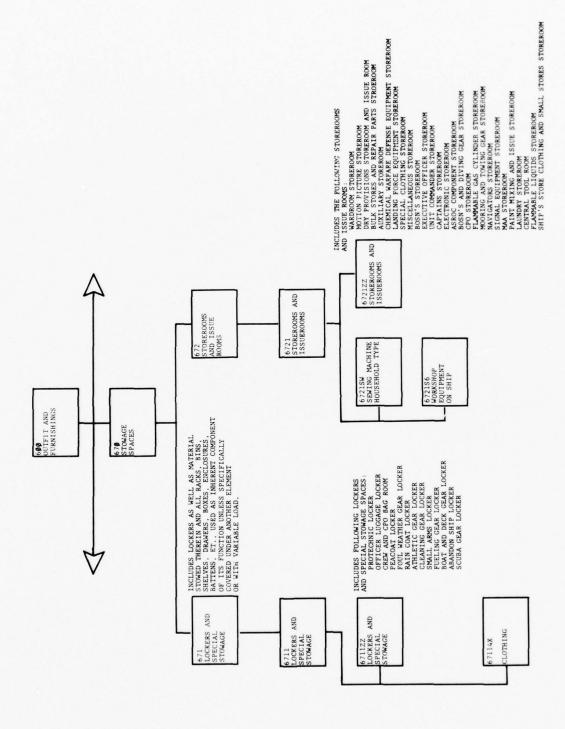


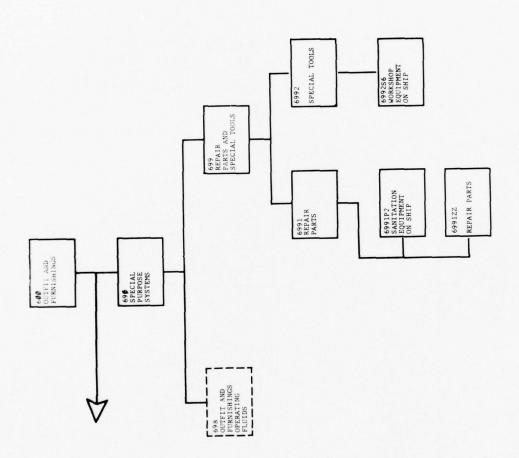


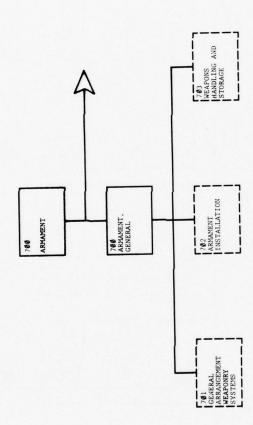




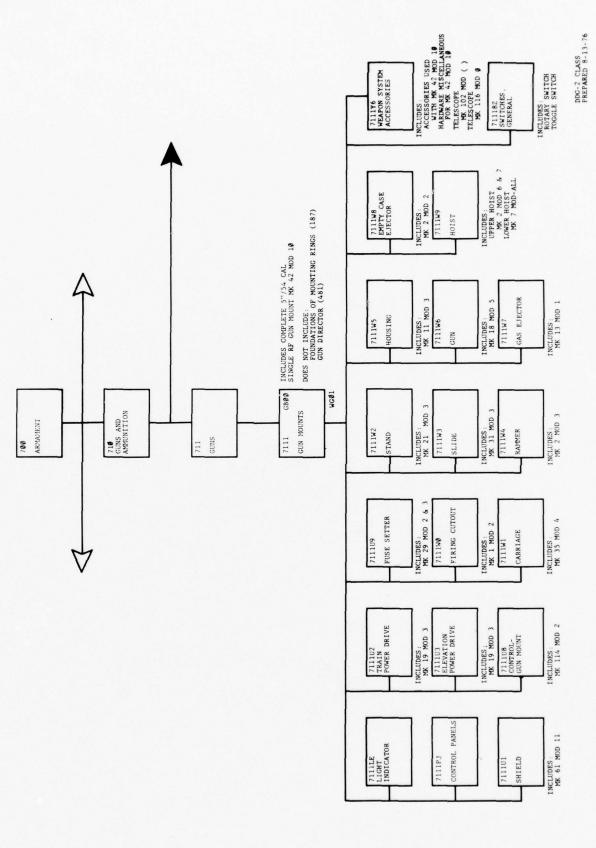
the state of the s

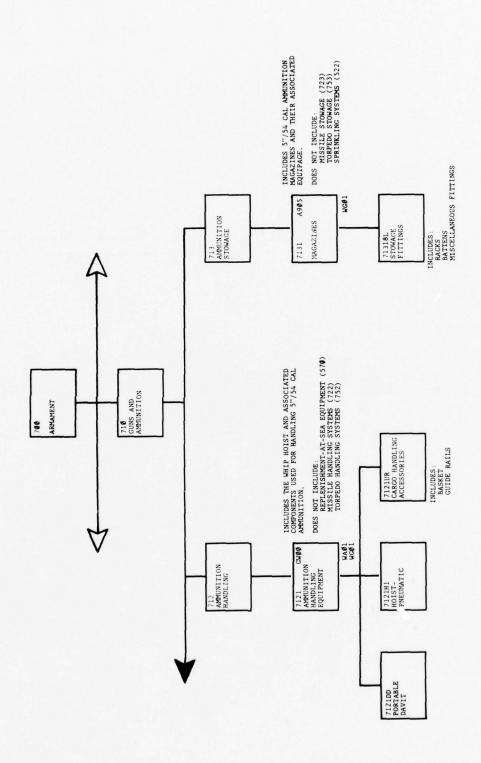


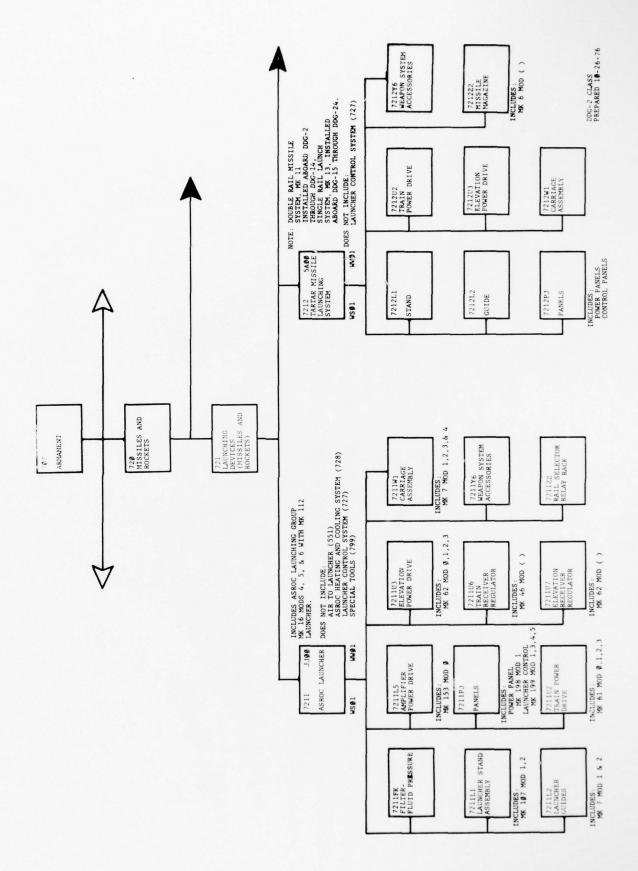


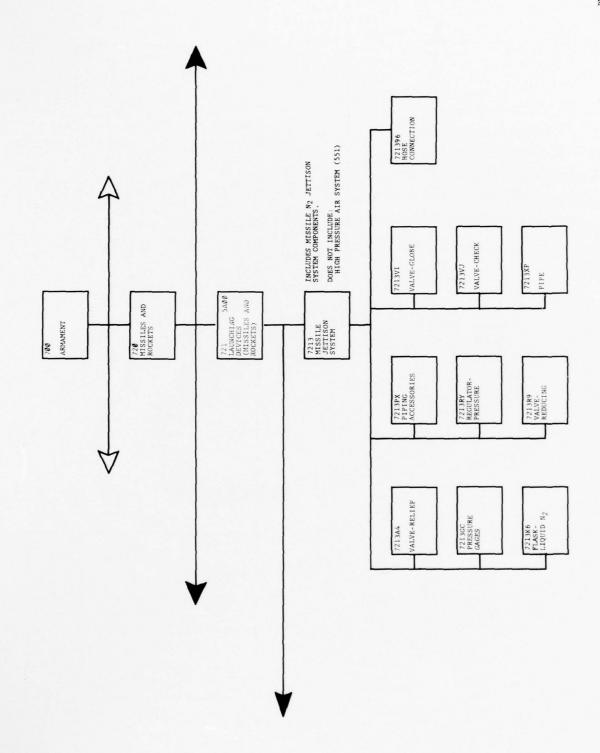


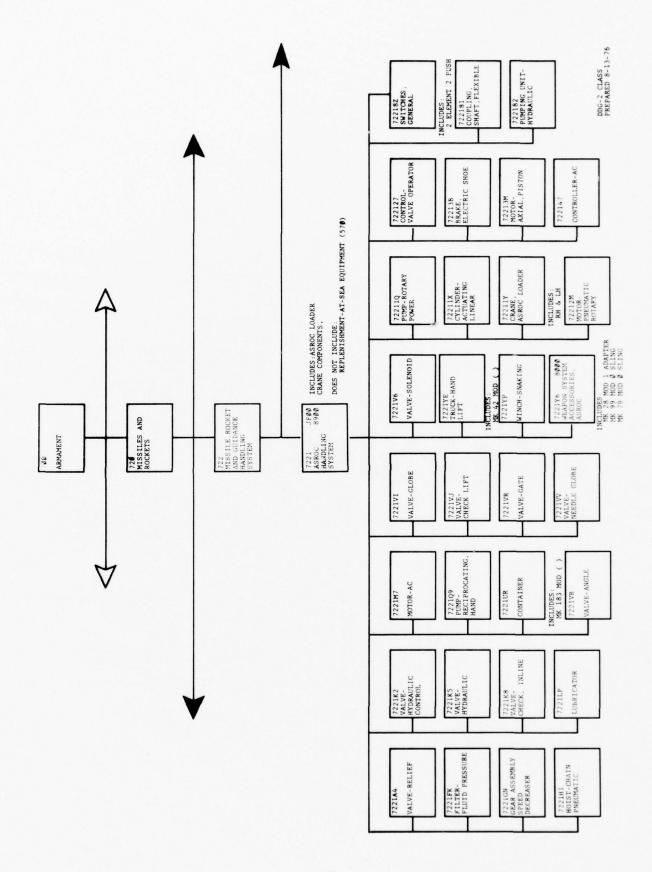
The second secon

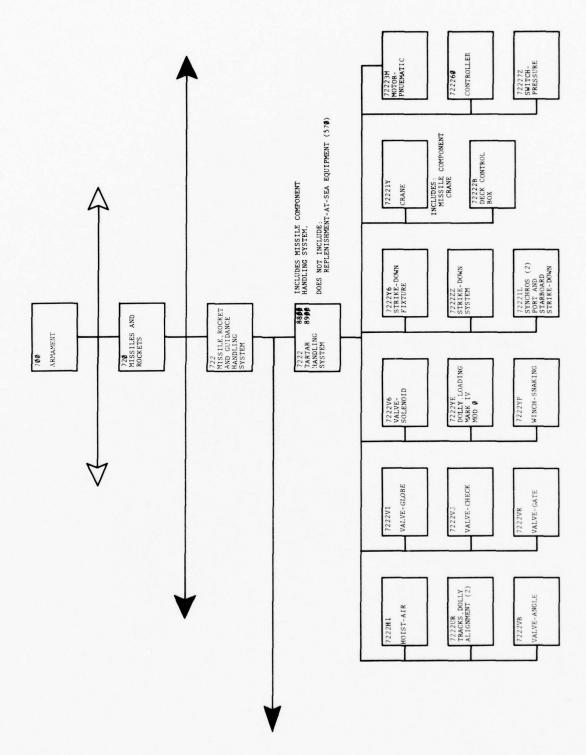


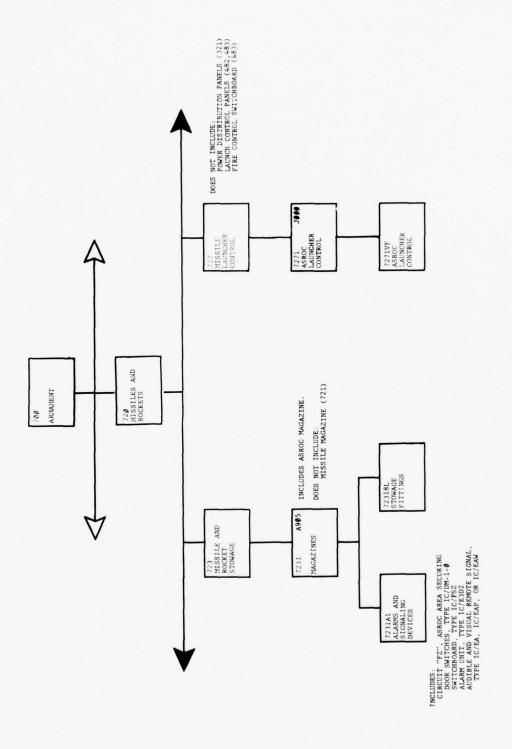


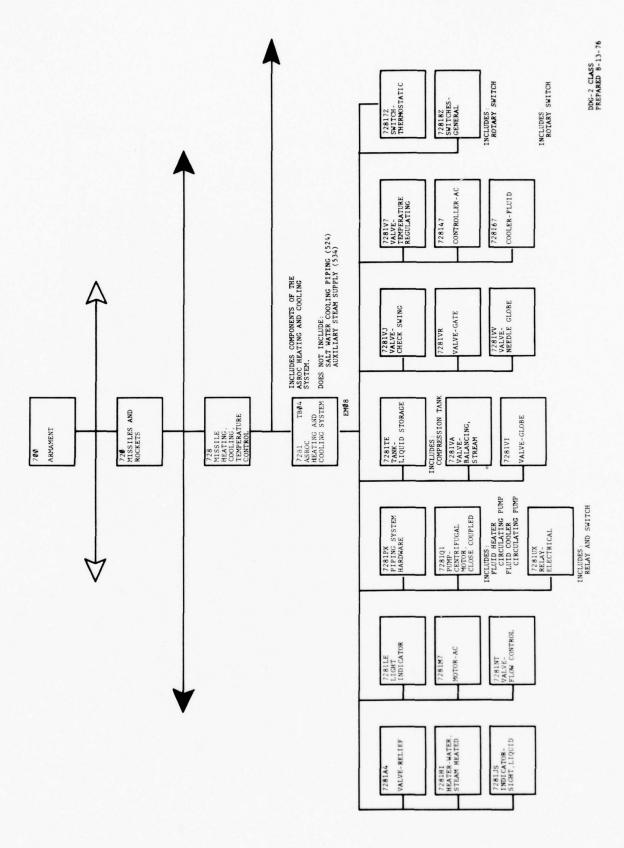


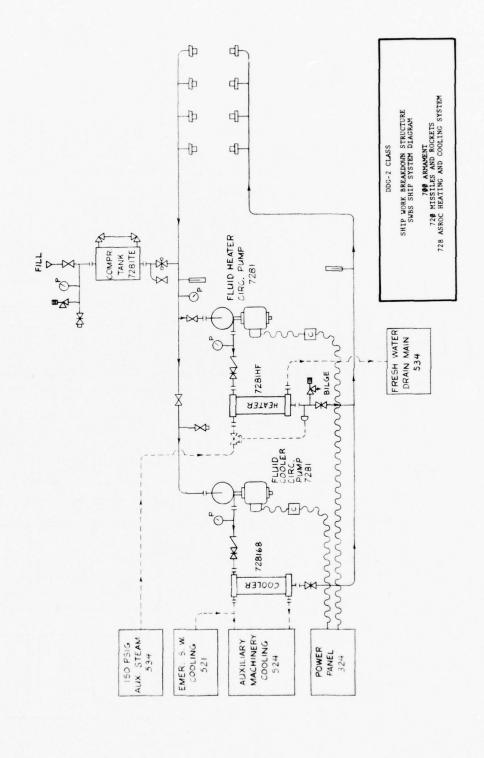




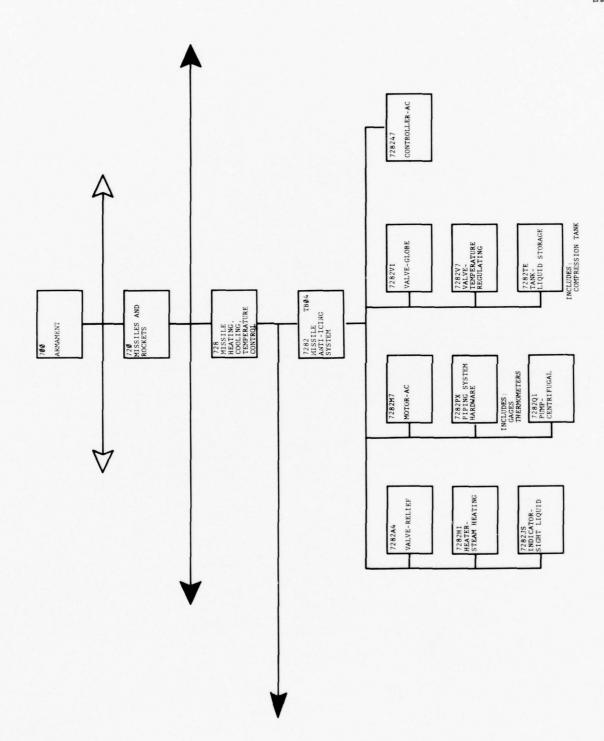


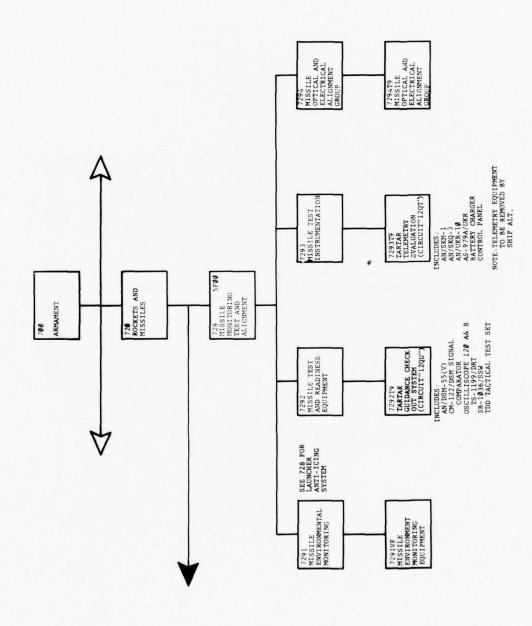


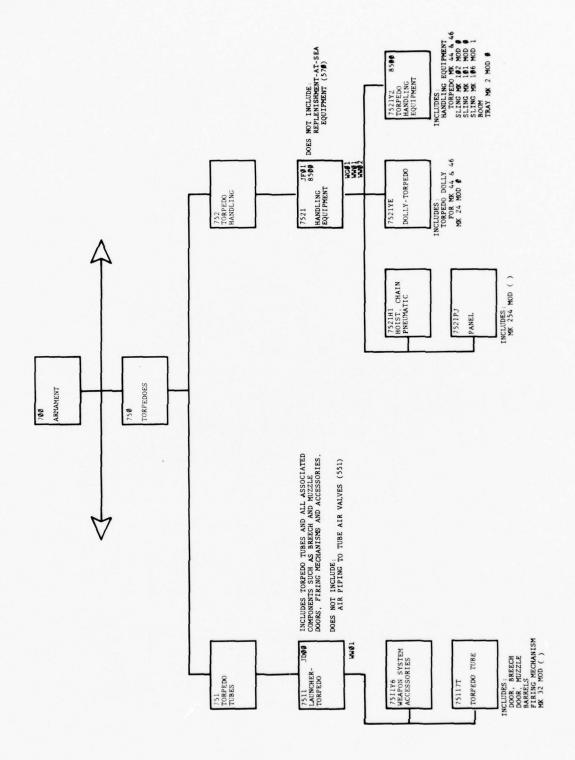


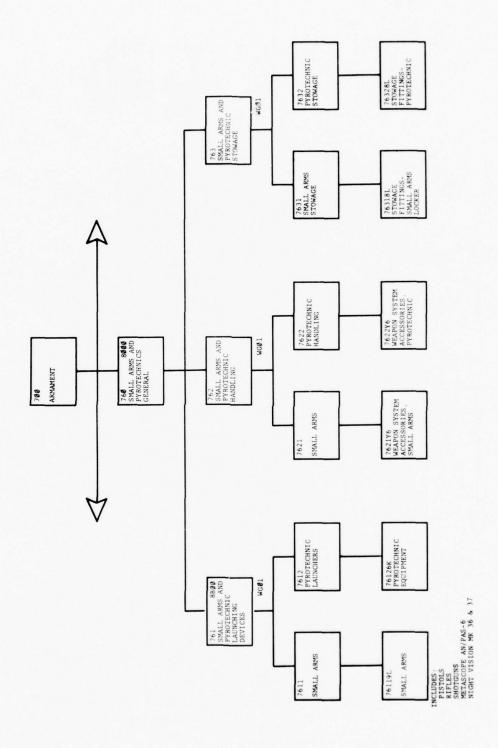


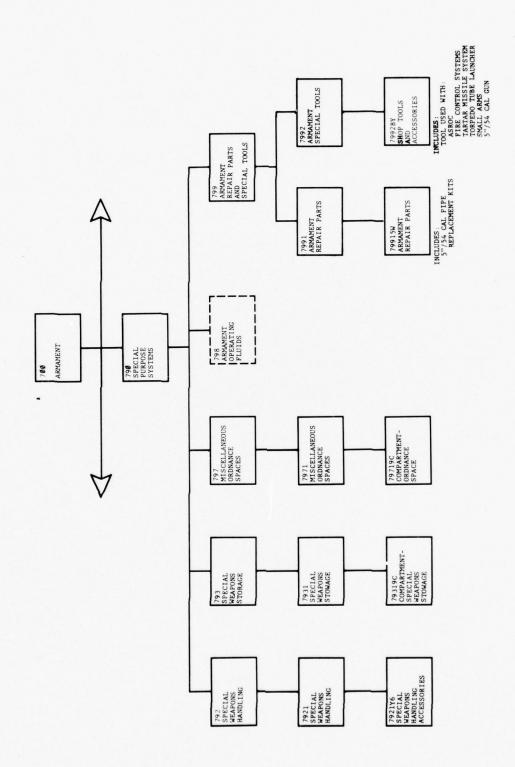
factors formed factors formed formed

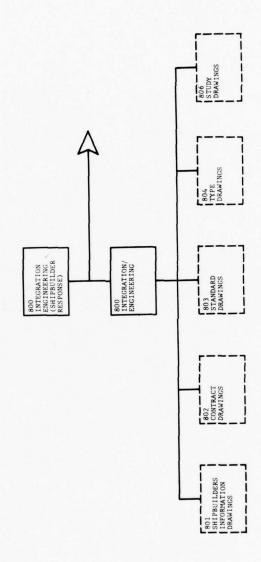


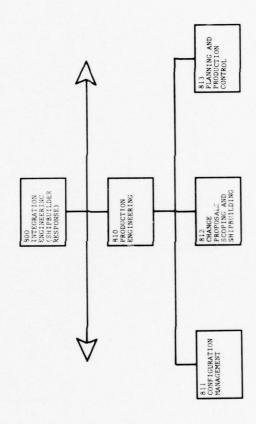


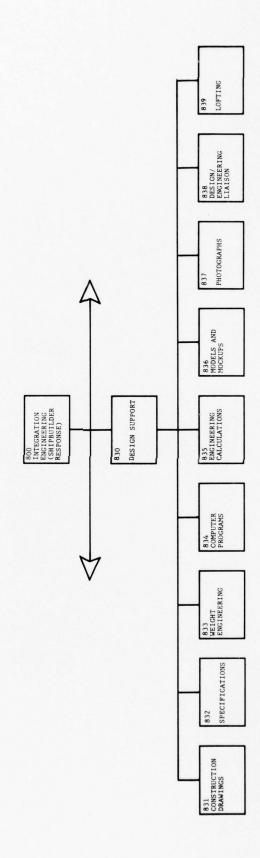


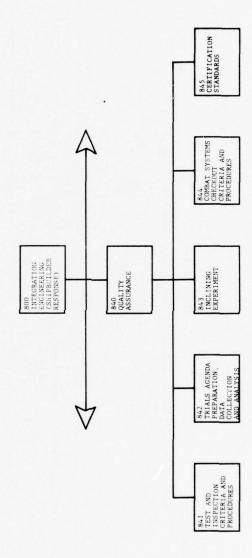




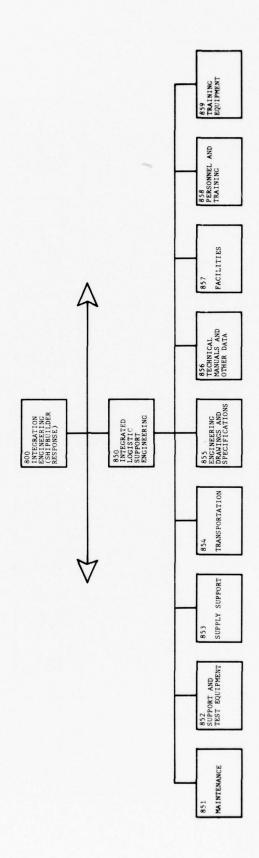


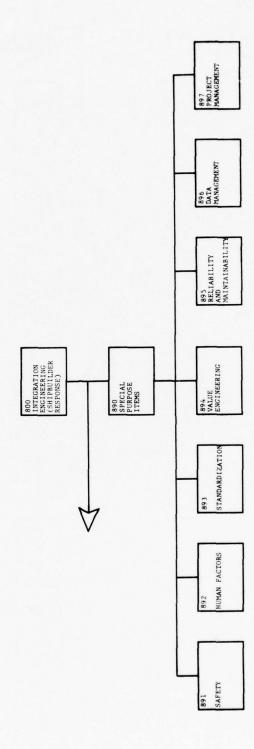






I





APPENDIX A COMPONENT DICTIONARY CODE LIST

APPENDIX A

COMPONENT DICTIONARY CODE LIST

```
AA C92
          ABANDON SHIP ACCESSORIES AND LIFE BOATS
AB AB-
          SUPPORTS. ANTENNA (ELEX)
AC 94-003 ACOUSTIC DEVICE-SEE ALSO CONTROL ACOUSTIC DEVICE-MINESWEEPING
AD 02-006 BOILER-AUXILIARY. STEAM. WASTE HEAT
AE 10-006 METER-ELECTRICAL INDICATING. AC AND DC METERS
AF 52-013 ACTUATOR-HYDRAULIC SEE ALSO CYL-ACT LINEAR
AG 61-265 ACTUATOR-PNEUMATIC & FLECTRO-PNEUMATIC
AH 41-040 CUTTING MACHINE-DXYGEN ACETYLENE
AT 31-009 CATHODIC PROTECTION EQUIPMENT
AJ 61-273 ACTUATOR-ELECTRO MECHANICAL
AK 85-008 ADAPTER-MISSILE HANDLING. CARGO HANCLING
AL 41-122 AGITATOR-PAINT. SHAKER TYPE
          AMPLIFIERS (ELEX/ORD)
AM AM-
AM
          AMPLIFIERS (ELEX/ORD)
AN 33-002 AIR CONDITIONER
          NOT ASSIGNED
DA
AP 88-011 VALVE-TEMPERATURE REGULATING. STEAM CONTROL
AQ 33-012 AIR CONCITIONER-WINDOW UNIT TYPE
AR 09-001 CHARGER-BATTERY.AC
AS 97-006 ANTENNA ASSEMBLY-BICONICAL OR STUB (HM&E/ELEX)
          ANTENNAE-SIMPLE & COMPLEX (HM&E/ELEX)
AS AS-
AT AT-
          ANTENNAE-SIMPLE (ELEX)
AU 36-001 ALARMS & SIGNALING DEVICES-HORNS. SIRENS AND WHISTLES. AIR CR STEAM
AV 41-006 CHARGER-MAGNET, PORTABLE
AW 36-005 ALARMS & SIGNALING DEVICES-WHISTLE. STEAM OF AIR
AX 41-046 CENTERING MACHINE-SINGLE SPINDLE
AY 03-001 COOLER-AIR
AZ 83-001 SEAL-STERNTUBE. SUBMARINE APPLICATION
AO 88-021 VALVE-BOILER BLOW
AL 36-003 ALARMS & SIGNALING DEVICES-BELL. BUZZER. SIREN ELECTRICAL
A2 23-009 ALARMS & SIGNALING DEVICES-LIGHT. INDICATOR. ELECTRICAL
A3 61-079 AMPLIFIER-MAGNETIC
A4 89-023 VALVE-SAFETY RELIEF, INCLUDING VACUUM BREAKERS
A5 61-082 AMPLIFIER-HYDRAULIC
A6 822
          STEERING AND DIVING TOCKS AND REPAIR PARTS
A7 823
          TOOLS AND EQUIPMENT CONS PLANT
A8 23-006 ANNUNCIATOR-MECHANICAL DROP-AC
          PERISCOPES - HOUSING FITTINGS
A9 B24
          BATTERY-PRIMARY TYPE (ELEX)
BA BA-
          BATTERY-SECONDARY TYPE (ELEX)
88 88-
8C C9-005 BATTERY-STORAGE
BD 37-001 BEAPING ASSEMBLY-STERN TUBE & STRUT
BE 41-001 BALANCING INSTRUMENT-PORTABLE
BF 85-037 BALL. NUT. & SCREW ASSEMBLY
BG C4-CC2 CONDENSER CHILLER-REFRIGERATION
BH 37-011 BEARING ASSEMBLY-THRUST. PIVOTED SEGMENTAL. SINGLE OR DOUBLE
BI 53-OCI CAPSTAN-SEE ALSO MODRING ACCESSORIES
BJ C37
          MEDICAL ECUIPMENT-PORTABLE
BK 93-011 BRAKE-PRCPULSION SHAFT (REGARDLESS OF PRIME MOVER)
BL 37-013 BEARING ASSEMBLY-THRUST AND JOURNAL WITH RESONANCE CHGR
BM C5-C23 COOLING UNIT-AIR TURBINE DRIVEN
BN 37-005 BEARING ASSEMBLY-LINE SHAFT
          NOT ASSIGNED
```

```
CDC LAPL
```

BP 25-042 BENCH MARK-CPTICAL BQ 41-097 BENDING MACHINE-POWER CPERATED \$3-003 BLENDER-AVIATION FUFL BS C5-030 TURROSUPERCHARGER-CENTRIFUGAL BOILER BT 05-031 TURBINE-GAS BU C2-OC1 BOILER-MAIN PROPULSION. HP STEAM RV C2-005 BOILER-AUXILIARY. HOT WATER BW 64-017 FIRE EXTINGUISHER-PORTABLE BX 88-027 VALVE-COMPRESSOR SHUT OFF BY C92 TOCLS AND ACCESSCRIES BZ BZ-ALARM UNITS (ELEX) MINOR LANDING CRAFT AND SMALL BOATS (INCL ALL COMMODITY CLASS 72) 30 B1 43-024 BREAD SLICING MACHINE 82 59-C17 BREATHING APPARATUS 83 89-OC1 BUOY-MESSENGER SEE ALSO UNDERWAY REPLEN ACC 84 C3-OC8 COOLFR-AIR 85 30-001 BURNER-CIL. PRESSURE ATOMIZING. BCILER SERVICE 86 30-002 BURNER-CIL, PRESSURE ATOMIZING. GUN TYPE B7 30-CC4 BURNER-CIL. VAPORIZING PCT 88 30-005 BURNER-CIL. ROTARY HORIZONTAL B9 30-007 BURNER-CATALYTIC CA CA-COMMUTATOR ASSEMBLY-SONAR (ELEX) CB CB-CAPACITOR BANK (ELEX) CC 32-C19 CABINET. ICE CREAM SEE ALSC REFRIGERATOR CD 28-005 CABINET. RESCLVER CONTROL-AUTOMATIC PLOTING CE 41-005 CABINET. BLAST CLEANING CF 85-038 CABLE MACHINERY-DECK CG CG-CABLE ASSEMBLY-RF (ELEX) GASOLINE AND JP - FUEL SYSTEMS TOOLS AND FITTINGS CH C15 CI 43-027 CABINET. DOUGH PROOFING CJ 54-006 CAMERA-COPYING. LITHCGRAPHIC CK CK-CRYSTAL KITS (ELEX) CL 99-002 CARBON DICKIDE CM CM-COMPARATOR (ELEX) CN CN-COMPENSATOR (ELEX) co c-CONTROLS (ELFX/ORD) CO CONTROLS (ELEX/ORD) CP CP-COMPUTER (ELEX/CRD) CP COMPUTER (ELEX/ORD) CO 85-042 CARRIAGE/CAR/CART/TRACTCR/TRAILOR CR CR-CRYSTALS (ELEX) CS 05-032 BASE/ENCLOSURE-GAS TURBINE CT 41-147 CARTON MACHINE COUPLER (ELEX) cu cu-CV CV-CONVERTER (SLEX/CRD) CV CONVERTER (ELEX/CRD) RADOMES (ELEX) CW CW-CABLE ASSEMBLIES. NON RF (ELEX) CX CX-CASES AND CARINETS (ELEX) CY CY-CZ 32-003 CHILLER-WATER CO 88-029 VALVE-REGULATING. WATER FLOW. FOR REFRIGERATION SYSTEMS CI 76-CC4 CHLORINATOR C2 31-032 CHCCK-RCLLER. DECK AND STERN C3 14-001 CIRCUIT BREAKER-NAVY TYPE AOB AND AOBLE C4 14-002 CIRCUIT BREAKER-NAVY TYPE NOB AND NLB C5 14-003 CIRCUIT BREAKER-NAVY TYPE ACB

```
C6 14-004 CIRCUIT BREAKER-NAVY TYPE ALB
CT 14-006 CIRCUIT BREAKER-CTHER THAN AGB. NOB. ACB.ALB TYPES
C8 41-148 CLEANING MACHINE-ALL TYPES EXCEPT BLAST CLNG CAB
C9 99-006 CLOSER-DOOR HYDRAULIC
          DUMMY LCAD (ELEX)
DB 33-007 DAMPER-ACTUATOR AND POSITIONER
DC 40-006 DAMPER-VENT. CCMBUSTION CONTROL
DD 56-OC1 DAVITS. ALL TYPES
DE 28-003 DEAD RECKONING EQUIPMENT
DF 85-024 DEFLECTOR. JET BLAST
NG 46-012 DEGAUSSING MAGNETIC MEASUREMENT SYSTEM
DH 41-011 DEGREASER
DI D-
          DISPENSER-CHAFF (ELEX)
DJ 44-002 DEHUMIDIFIER-DESICCANT ELECTRIC
DK 44-CC9 DEHUMIDIFIER-SPACE. MECH REFRIG SELF CONTAINED
DL 32-005 DEHYDRATOR-REFRIGERATION
DM 44-001 DEHYDRATOR-FILER. DESICCANT, HGH PRES AIR. SELF REAC
DN 44-004 DEHYDRATOR-NON REACTIVATING
no
          NOT ASSIGNED
DP C8-007 DEMINERALIZER-WATER. ION EXCHANGE
DO 99-027 DESUPERHEATERS-ALL TYPES
DR C6-2C5 COMPRESSOR UNIT-AIR
DS 33-005 CAMPER-MECHANICAL EXHAUST VENTILATION SYS
DT DT-
         DETECTING HEADS (ELEX)
DU 54-021 DEVELOPING MACHINE-BLACK AND WHITE PROCESS
DV 43-001 DISH WASHING MACHINE
DW 41-049 DISINTEGRATING MACH-METAL. ELEC ARC
DX 32-014 DISPENSER-DRINKING WTR SEE ALSO DRNKG FTN(67-006)
         DYNAMOTORS (FLEX)
DY DY-
DZ 32-032 DISPENSER-MECHANICALLY REFRIGERATED. MILD
DO C9-002 CHARGER-BATTERY. D.C.
DI 41-146 DISPENSER-TAPE. ELECTRIC
D2 32-031 DISPLAY CASE-MECH REF. SELF CONTND/NON-REFR
D3 C6-CG2 COMPRESSOR-RECIPPOCATING
D4 08-OCI DISTILLATION UNIT
D5 52-015 DESURGER-HYDRAULIC
D6 32-027 DISPENSER-MECH REF.OTHR THN MLK SEE CAB.ICE CR/FREEZR
D7 09-005 DISTILLATION UNIT-VAPOR COMPRESSION
D8 85-011 DOLLY-BOATSTORAGE SEE ALSO TRK/DOLLY/CRADLE ASS
D9 31-034 DOOR-ROLLER CURTAIN. SHIPBRD. HAND OR PWR CPER
EA 74-001 EDUCTOR-LIQUID
FB 49-001 CARBURETOR
EC 73-010 EJECTOR-GARBAGE AND TRASH DISPOSAL
ED C7-011 HEATER-FLUID
EF 88-031 VALVE-BURBLER
EF 73-012 EJECTOR-SIGNAL
EG 73-001 EJECTCR ASSEMBLY-AIR
EH E-
          HOISTS (ELEX)
EI
          NOT ASSIGNED
EJ 11-003 CONVERTER
EK 849
          NITROGEN CHARGING ASSEMBLY
EL 59-001 ELEVATOR-ELECTRO MECHANICAL
EM 15-013 CONTROLLER-AC
EN 16-010 GENERATOR-GAS
EO
          NOT ASSIGNED
EP 59-002 ELEVATOR-AIRCRAFT LIFTING
```

```
EQ 41-050 EMBOSSING MACHINE-METAL & CROBRO ALSO OFF MACH ACC
ER 15-012 BENCH-LIQUID CXYGEN CONVERTER FILL
ES 66-001 ENGINE-DIESEL, SHIP PROPULSION AND SHIP'S SERVICE. 2 & 4 CYCLE
ET 22-022 SWITCHBCARD-MINESWEEPING
EU 88-037 VALVE-REFRIGERATION SHUT OFF. SMALLER THAN 3/4 IN
EV 66-CC5 ENGINE-CIESEL. 2 & 4 CYC. TYPE B
EW 16-014 BOOSTER-GAS
EX 66-006 ENGINE-DIESEL, NON-MAGNETIC MINESWP PROP & AUX 4 CYC
EY 66-C17 ENGINE-GASOLINE AIR CR FLUID COOLEC
EZ 18-007 MOTOR GENERATOR
EO 83-042 VALVE-FLCAT, LIQUID LEVEL CONTROL, REFRIGERATION SYSTEMS
E1 66-019 ENGINE-GASOLINE. BOAT PROP. DUTBOARD MOTOR
E2 66-020 ENGINE-STEAM, RECIPROCATING, MN PROP & AUX SERVICE
E3 88-C44 VALVE-STEAM SEAL MANIFOLD
E4 88-045 VALVE-GUARDING
E5 41-C51 ENGRAVING MACHINE PANTEGRAPH
E6 59-005 ESCALATOR
E7 C9-011 EXCHANGER. ICN
E8 93-001 EXPANSION JOINTS-PIPE . PACKLESS
E9 88-046 VALVE-TRIP THRCTTLE
FA 40-001 FAN-VANEAXIAL AND/OR TUBEAXIAL
FB 18-009 MOTOR GENERATOR
FC 40-002 FAN-CENTRIFUGAL
FD 20-002 RHEDSTAT
FE 40-003 FAN-CIRCULATING
FF 40-009 FAN-CENTRIFUGAL. CARBON DIOXIDE REMOVAL SYS
FG 99-030 FEEDRAIL-BRIDGE CRANE
FH 41-076 FILING MACHINE-SAW. BLADE
         BOILER FEEDWATER TEST AND TREATMENT
FI C56
FJ 09-010 FILLER-PORTABLE BATTERY WATER
FK 48-002 FILTER-FLUID . PRESSURE
FL F-
         FILTER UNITS (ELEX)
FM 20-006 RHEOSTAT
          FURNITURE (ELEX)
FN FN-
          NOT ASSIGNED
FO
FP 88-043 VALVE-CROSSOVER AND MANIFOLD
FO 43-034 FILTER-COCKING GREASE
FR FR-
          FREQUENCY MEASURING DEVICES (ELEX)
          FUEL DIL STOWAGE AND EQUIPMENT
FS C55
FT 31-023 FITTINGS-HULL SEE ALSO TOWING-ACC. MOORING ACC
FU 24-002 FIXTURE-LIGHTING
FV 48-CC6 FILTER-AIR. WET CR DRY ELEMENTS
FW 76-003 FILTER-WATER PURIFICATION
FX 31-012 FLAME ARRESTER-VENTILATION
FY 54-015 FOLDING MACHINE-PAPER
FZ 43-012 GRINDERS AND CUTTERS-FOCD ELECTRICAL
FO 16-011 FURNANCE ASS CXY CANDLE ROUND AND SOUARE
F1 43-059 FOOD WARMER-RADIANT. OVERHEAD. ELECTRIC
F2 41-016 FORGE-OIL BURNING ELEC OR OTHER ALSC FURNACE
F3 41-053 FORGING MACHINE-HAMMER VERTICAL
F4 41-017 FORMING MACHINE-SHEET METAL
F5 54-0C4 FRAME PRINTING
F6 43-006 FRYERS-DEEP FAT. ELECTRIC
F7 85-046 FUEL DISPERSING SYS
F8 41-019 FURNANCE- ELECTRIC
```

F9 41-020 FURNANCE-DIL BURNING

```
GA 45-003 GAGE-LIG ONTY MECHANICAL SEE ALSO INDICATOR AND METER
GB 45-004 GAGE-LICUID QUANTITY HYDRAULIC/PNEUMATIC
GC 45-007 GAGE-PRESSURE
GD 45-009 GAGE-DEPTH SUPMARINE
GF 43-002 GALLEY FOUIPMENT-ELECTRICAL
GF 43-CC9 GARBAGE DISPOSAL MACHINE
GG 31-0C5 GATE-STERN SEF ALSO DOCK OR HATCH
GH G-
          GENERATOR-POWER (ELEX)
GI 867
          OPERATING GEAR MISCELLANEOUS REPAIR PARTS
GJ 43-047 DOUGHNUT MACHINE-CUTTING AND FRYING
GK 69-028 GEAR-TURNING/JACK DEVICE
GL 69-029 GEAR-TILTING
GM 69-006 GEAR ASSEMBLY-SPEED DECREASER.MAIN PRCP SERVICE
GN 69-016 GEAR ASSEMBLY-SPEED DECREASER. AUX SERVICE
          GONIOMETERS (ELEX)
GO GO-
GP GP-
          GROUND RODS (ELEX)
GO B51
          BOILER FEEDWATER SYSTEM CONTROL FITTINGS
GR 23-008 SEMAPHORE-MECHANICAL SIGNAL
GS 43-044 GALLEY UNITS-COMPACT
GT 16-006 GENERATOR-DC CR AC
GU 24-004 FIXTURE-LIGHTING FLUCRESCENT
GV 24-CC6 FIXTURE-LIGHTING MERCURY VAPOR
GW 16-CC8 GENERATOR-SMCKE. MECHANICAL
GX 16-009 GENERATOR-OXYGEN/NITROGEN
GY 16-001 GENERATOR-BATTERY CHARGING
GZ 70-001 GOVERNOR-MECHANICAL
GO
          FUEL GELLING UNIT MIG - 10
G1 70-005 GOVERNOR-HYDRAULIC
G2 88-072 GOVERNOR-PUMP
G3 70-013 GOVERNOR-ELECTRO HYDRAULIC
G4 70-014 GOVERNOR-ELECTRIC
G5 23-004 SEARCHLIGHT-SIGNAL
G6 41-057 GRINDING MACHINE-CYCLINDRICAL
G7 41-060 GRINDING MACHINE-GLASS
G8 41-063 GRINDING MACHINE-VALVE
G9 41-065 GRINDING MACHINE-SURFACE, RECIPROCATING
HA 85-031 HANDLING GEAR-GUIDANCE CAPSULE
HB 85-045 HANGAR-AIRCRAFT
HC HC-
          HOLDER. CRYSTAL (ELEX)
-CH OH
          ENVIRONMENTAL APPARATUS (ELEX)
HE C7-002 HEATER-FLUID. FUEL DIL AND LUBE DIL. STEAM HEATED
HE C7-003 HEATER-WATER AND ATR
HG 26-015 PROJECTOR-MOTION PICTURE. SOUND. SUPER 8MM
HH 07-004 HEATER-WATER. STM/HT WTR HTD.INST. STM WTR CVTR
HI 07-001 HEATER-FLUID. SEA WATER. STEAM HEATED
HJ 07-005 HEATER-FLD. DEAERATING. BOILER FDWTR. TYPES I & II
HK C7-006 HEATER-IMMERSION. ELECTRIC
HL 07-CC7 HEATER-SPACE ELEC. TYP D RADIANT. TYPE T TUR. RAD PANL
HM 26-016 PROJECTOR-MOTION PICTURE. SOUND. SUPER 16MM
HN 07-013 HEATER-WTR. ELECTRIC STCRAGE TYPE
          NOT ASSIGNED
HO
HP 07-016 HEATER-CCOLANT ENGINE. OIL FIRED OR ELECTRIC
HO 07-022 HEATER-VENTILATION . VENT DUCT. ELEC. TYP 51-61
HR 07-023 HEATER-SPACE ELECTRIC. BLOWER. TYPE B
         HEAD. HAND. AND CHEST SETS (ELEX)
HS h-
HT 07-017 HEATER-AIR CIRCULATING UNIT. STEAM CR HT WTR HTD
```

```
HU 07-045 HEATING ELEMENTS-ELEMENTS-ELECTRICAL
HV 07-036 HEATING UNIT-ELEC. CONTRLD TEMP FOR STRSS RELF PRHTG
HW 58-OC1 HOIST-WIREROPE ELECTRIC
HX 58-002 HOIST-MANUAL
HY 58-003 HOIST-ELECTRO HYDRAULIC & ELECTRO-MECHANICAL
HZ 58-004 HOIST-CHAIN ELECTRIC
HO 61-116 HYDROSTAT. CENTREL
HI 58-005 HOIST-PNEUMATIC
H2 58-0C6 HOIST-HYDRAULIC
H3 85-025 HOIST-WINDSCREEN
H4 87-009 HOIST-RODMETER. U/W LOG
H5 52-033 HOIST ASSEMBLY-CYL & RAM TYP FOR COMMUN MAST
H6 41-069 HONING MACHINE-HERIZONTAL OR VERTICAL
H7 33-010 HUMIDIFIER
H8 52-016 HYDRAULIC MECHANISM SEE ALSO MISSLE HNDG SYS-HYD
H9 31-033 HYDROFOIL ASSEMBLY
IA 64-018 FIRE FXTINGUISHING SYSTEM
18 66-002 ENGINE-DIESEL. TWO CYCLE
          IC COMMUNICATION EQUIPMENT
IC 865
TO ID-
          INDICATOR-NON CATHODE RAY TUBE (ELEX/CRD)
ID
          INDICATOR-NON CATHODE RAY TUBE (ELEX/CRC)
IE 66-018 FNGINE-GASOLINE
IF 66-021 ENGINE-CIESEL. NCNMAGNETIC
IG 66-022 ENGINE-DIESEL. MCDEL 645
TH 69-026 GEAR ASSEMBLY-SPEED INCREASER
II 71-001 DISTRIBUTOR-IGNITION SYSTEM
IJ 73-011 EJECTCR-SEWAGE
IK 78-018 COUPLING ASSEMBLY
IL IL-
          INSULATORS (ELEX)
IM IM-
          INTENSITY MEASURING DEVICES (ELEX)
IN 79-003 MUFFLER-DRY
10
          NOT ASSIGNED
IP IP-
          INDICATORS-CATHOCE RAY TUBE (ELEX)
IQ 83-015 CONTROL BOARD-CONTROLLABLE PITCH PROPELLER. EMER. PITCH CONTROL
IR 91-004 LAUNDRY PRESS-COMMERCIAL
IS 859
         AIR CONDITIONING REFRIGERATION TOOLS AND ACCESSORIES
IT 92-020 TANK-LUBE DIL STORAGE AND CONDITIONING ASSEMBLY
IU 94-004 ACOUSTIC DEVICE
IV 94-005 ACOUSTIC DEVICE
          NOT ASSIGNED
IW
IX 97-012 SUB ASSEMBLIES-PERISCOPE
IY 97-018 CAMERA ACCESSCRIES-PERISCOPE
IZ 99-029 RECEIVER-FUELING PROBE
          NOT ASSIGNED
10
          NOT ASSIGNED
11
          NAVIGATIONAL SIGNAL LIGHTS
12 864
          NOT ASSIGNED
13
          NOT ASSIGNED
14
          NOT ASSIGNED
15
          NOT ASSIGNED
16
          NOT ASSIGNED
17
          NOT ASSIGNED
          NOT ASSIGNED
19
JA 43-028 ICE CREAM CUP FILLING MACHINE- HAND CPERATED
JB 32-017 ICE CREAM FREEZER-PWR OPER WITH INTERL MCH REF EQ
JC 32-022 ICE MAKING MACHINE-MECH REFRIG SELF CONTAINED
```

```
JD J-
          INTERFACE UNITS (ELFX)
JE 32-004 ICE MAKING PLANT
JF 41-032 IMPREGNATING FCUIPMENT
JG 30-006 INCINERATOR SEE ALSO BURNER
JH 27-008 SALINITY INDICATING EQUIPMENT
          NOT ASSIGNED
JI
JJ 38-002 INDICATOR-TEMPERATURE. ELECTRICAL
JK 28-028 NAVIGATION EQUIPMENT
11
   38-GOT INDICATOR-BOILER SMOKE
JM 38-014 INDICATOR-SALINITY & SALINITY CELL
JN 38-015 INDICATOR-PRES DIFFERTL. LIQ/STM LVL. DIR OR REM
          NOT ASSIGNED
10
JP 38-015 INDICATOR-MECHANICAL TACHOMETER
JO 36-020 INDICATOR-LIO LVL. FLOW. WATER AND FUEL
JR 45-001 INDICATER-SIGHT LIQUID. FLAT
JS 45-002 INDICATOR-SIGHT LIQUID. TUBULAR
JT 45-005 INDICATOR-METER, DIFFERENTIAL PRESSURE
JU 61-025 INDICATOR-PORTABLE SHIP CONTROL
JV 41-111 VULCANIZER - PLBBER COVERED CABLE
JW 29-001 INJECTOR- FUFL DIESEL ENGINE NOZZLE NON-MET TYP
JX 29-002 INJECTOR-FUEL. DIESEL ENGINE. UNIT METERING AND PRES
JY 43-060 INJECTOR-RINSE AGENT FOR DISHWASHING MACHINE
JZ 887
          MEASURING AND INDICATING INSTRUMENTS
JO 31-011 TENSION UNIT-HYDRAULIC RAM
J1 27-009 INTERCOMMUNICATION STATION
J2 97-002 MAST-ANTENNA
J3 97-013 MAST-SNORKEL
          NUCLEAR POWER PLANT - COCLANT DISCHARGE SYSTEM VALVE
J4 589
J5 85-035 JACK ASSEMBLY-HAND, SCREW, HYDRAULIC/PNEUMATIC OPR
J6 41-034 JOINTER-WCODWCRKING
J7 27-010 TELEPHONE EQUIPMENT-DIAL
J8 43-008 KETTLE-STEAM JACKETED
J9 41-070 KEY DUPLICATING MACHINE
KA 40-004 DRIER-HAND. FLECTRIC
KB 86-0C3 DRIFR-PHCTGGRAPHIC
KC 41-014 DRILLING MACHINE-FLOOR OR BENCH
KD 43-050 TABLE-FOCD WARMER . ELECTRIC / STEAM HEATED
KE 54-014 DRILLING MACHINE-PAPER
KF 67-006 DRINKING FOUNTAIN
KG 52-001 DRIVE ASSEMBLY-ELECTRO HYDRAULIC AMMUN HOIST
KH 52-004 DRIVE ASSEMBLY-ELECTRO HYD HST. VERT TUB. . 12.75RKT
KI 16-005 TACHOMETER SEE ALSO INDICATOR-MECHANIC TACHOMETER
KJ 52-007 DRIVE ASSEMBLY-ELECTROHYDRAULIC HOIST.3000# MIS TRAV
KK 88-063 VALVE-PRESSURE REGULATING
KL 85-004 DRIVE ASSEMBLY-SLIDING BLOCK
KM 91-008 DRY CLEANING PRESS
KN S1-OC7 DRY CLEANING UNIT ASS-AUTO. SYNTHET SCLVENT TYPE
KO
          NOT ASSIGNED
KP 54-018 DRYING MACHINE BLUEPRINT
KO 91-002 DRYING TUMBLER-LAUNDRY
KR 59-0C3 DUMB WALTER
KS 54-002 DUPLICATING MACHINE-OFFSET SEE ALSO CFF MACH ACC
KT 41-015 DYNAMOMETER
KU 41-131 TANK-HOT DIP
KV 92-005 TANK-DIESEL ENGINE.AIR STARTING
KW 92-001 TANK-STCRAGE
```

```
KX 83-104 VALVE-STOP CHECK
         KEYING DEVICES (ELEX)
KY KY-
KZ 88-117 VALVE SUBPLATE
KO 88-125 VALVE-PRESSURE CONTROL
K1 88-129 VALVE-PRESSURE REGULATING
K2 88-130 VALVE-HYDRAULIC CENTREL
K3 01-010 PUMP, ROTARY PISTON, FIXED OR VARIABLE CELIVERY
K4 88-134 VALVE-SHUTTLE
K5 88-135 VALVE-HYDRAULIC
K6 88-138 VALVE-CHECK. INLINE. UNDER $25.00
K7 01-025 PUMP, PCRTABLE SUBMERSIBLE
K8 88-142 VALVE-CHECK. INLINE. $25.00 AND ABOVE
K9 88-158 VALVE-TEST CASTING
LA 24-009 LANTERN-ELECTRIC. BATTERY TYPE
LB 41-036 LATHE-METAL WERKING
LC IC-
         TOOLS-LINE CONSTRUCTION (ELEX)
LO 91-012 LAUNDRY EQUIPMENT
LE 23-002 LIGHT-INDICATOR
LF 24-008 LIGHT-NAVIGATIONAL MARINE
LG 54-024 LIGHT-ARC PHCTCLITHOGRAPHIC
LH 16-015 LIQUIDIFIED GAS STORAGE AND CHARGING SYS
         NOT ASSIGNED
LI
LJ 54-007 LITHOGRAPHIC. NEGATIVE AND PLATE MAKING
LK 99-020 LOCK-ELECTROMECHANICAL
LL 28-018 LCCKER-BINOCULAR DRYING
LM 26-013 LOUDSPEAKER-MOTION PICTURE PROJECTOR
IN 65-001 LUBRICATOR-MECHANICALLY OR HAND OPERATED
          NOT ASSIGNED
LO
LP 65-002 LUBRICATER-AIR OPERATED
10 C16
        LADDERS AND ACCESS CLCSURE EQUIPMENT
         LUBE OIL PIPING SYSTEM REPAIR PARTS
LR 845
LS LS-
          LOUDSPEAKERS (ELEX)
LT 41-037 LATHE-WCCOWORKING
LU 88-159 VALVE-DISTRIBUTOR LUBRICATION
LV 41-141 UNDERCUTTER - ARMATURE. MICA. ELECTRICAL OPERATED
LW C20
         UNDERWAY REPLENISHMENT TOOLS AND ACCESSCRIES
LX 32-008 UNION TUBE - REFRIGERATION
LY 43-005 UPNS -COFFEE
LZ 89-162 VALVE-SHEARING
LO 88-169 VALVE-LINE BLIND
          LAUNCHER STAND-WEAPON SYSTEM
11
          LAUNCHER GUIDES-WEAPON SYSTEM
L2
          TRAIN ASSEMBLY-WEAPON SYSTEM
L3
          ELEVATION ASSEMBLY-WEAPON SYSTEM
14
15
          AMPLIFIER . POWER CRIVE-WEAPON SYSTEM
          RAMMER-LCADER ASSEMBLY-WEAPON SYSTEM
16
L7 88-170 VALVE AND TRAP MANIFOLD
L8 88-177 VALVE-SPECIAL STCP CHECK
L9 88-186 VALVE-FLCW FUSE
          MAGAZINE-MAGNETIC TAPE OR WIRE (ELEX)
MA MA-
MB 68-001 MAGNETO-IGNITION
MC 32-006 MANIFOLD-REFRIGERATION
          MODULATORS. DEMOCULATORS. AND DISCRIMINATORS (ELEX)
MD MD-
ME ME-
          METERS (ELEX)
         MAGNETS CR MAGNETIC FIELD GENERATORS (ELEX)
MF MF-
MG 45-008 MANOMETER-U TUBE AND OTHER TYPES
```

CDC LAPL MI Y-

MH 91-UC6 MARKING MACHINE-LAUNDRY MICROPHONES (ELEX) MJ 85-030 MAST-HINGED MISCELLANGOUS KITS (ELEX) MK MK-ME ME-METECROLOGICAL DEVICES (ELEX) MM 43-016 MEAT SLICING MACH-FLEC & MANUAL SEE ALSO FCCC CUTTER MN 43-021 MEAT TENDERIZER-ELECTRIC 40 NOT ASSIGNED MP 10-001 METER-VOLUMETRIC. POS CISPL.FUEL CIL.WTR.GAS.JP-5.AL T MQ 10-002 METER-FLOWRATE INDICATING. FLOAT TYPE RCTAMETER MR 10-003 METER-IMPELLER TYPE LIQUID VELOCITY MS 10-004 METER-VENTUR! TYPE MT MT-MOUNTINGS (ELEX) MU MU-MEMORY UNITS (ELEX) MV 41-042 MILLING MACHINE-HORIZONTAL MW 41-043 MILLING MACHINE-WCCDWORKING. VERTICAL. BCRING MX MX-MISCELLANEOUS EQUIPMENT (ELEX) MY 41-038 MIXER-LIQUID. PORTABLE MZ 43-004 MIXING MACHINE-ELECTRIC, FOOD AND FLUID MO 28-031 SEXTANT, MARINE M1 43-035 MOLDING MACHINES-MEAT. FISH ANCHORING AND MOCRING APPLIANCES M2 C26 M3 41-088 MORTISER-HOLLOW CHISEL M4 17-023 MOTOR-AC/DC 0.25 HORSEPOWER AND SMALLER M5 31-039 SONAR DOME WINDOW SYSTEM M6 10-005 METER-FLOWRATE INDICATING. VANE TYPE M7 17-001 MOTOR-AC OR DC M8 31-040 TENSIONING DEVICE-TORSION BAR M9 E32 MISCELLANFOUS FLAG ALLOWANCES. OFFICE MACHINES NA 32-021 CARBONATOR-SCOA FOUNTAIN NB 13-013 TRANSFORVERS-REPAIRABLE AND NON-REPAIRABLE NC 32-025 ICE CREAM FREEZER NO 33-004 CHILLER-WATER. AIR CONDITIONING NE 61-080 AMPLIFIER-ELECTRONIC NF 52-005 TRANSMISSION-HYDRAULIC.FIXED OR VARIABLE DELIVERY SEE ALSO POWER UNIT NG 69-011 TRANSMISSION-MECHANICAL NH 27-005 TRANSMITTER-MECHANICAL NOT ASSIGNED NI NJ 27-006 TXMT9-LIG LVL ANG/OR FLOW.CAP.FLOAT.IND.RADICACT.RES AND SONIC TYPE NK 27-021 TPANSMITTER-LIQUID LEVEL. FLECTRICAL NL 28-024 TRANSMITTER-NAVIGATIONAL NM 61-085 TRANSMITTER-TEMPERATURE SEE ALSO INCICATOR - TEMPERATURE. ELEC RESIST NN 27-OC1 TRANSMITTER/INDICATOR-ELECTRICAL TRANSMITTER TYPES NOT ASSIGNED NP 54-022 PRINTING MACHINE-BLUEPRINT

NO 85-043 STAND-MISSILE NR 88-192 VALVE-PRESSURE REGULATING. HIGH PRESSURE AIR STEEL PLATE NS NT 88-193 VALVE-FLCW CONTROL NU 88-201 VALVE-OPFICE NV 77-001 TRAP-STEAM AND/OR AIR NW 37-016 BEARING-JOURNAL, PIVOTED PAD/SHOE

NX 38-021 INDICATING SYSTEM-LIQUID LEVEL. PNEUMATIC NY 41-002 BALANCING MACHINE-DYNAMIC. STATIC. HCRIZONTAL NZ 41-031 MACHINE-HOSE ASSEMBLY. REPAIR AND CUTCFF

NO 93-004 NOZZLE-PRESSURE FUEL SERVICING

```
W. C24
          NAVIGATION EQUIPMENT AND ACCESSORIES
M2 28-027 NAVIGATION EQUIPMENT-PLOTTING SYS SEE ALSO PLTG TABLE
N3 28-026 NAVIGATION EQUIPMENT-DEAD RECKONING EQUIPMENT
N4 28-001 NAVIGATION PLCTTING BOARDS
N5 28-011 NAVIGATIONAL CLOCKS
N6 31-041 DOOR-HINGED-HAND OPERATED
N7 64-001 NOZZLE-FIRE HOSE SEE ALSO DAMAGE CONTROL ACC
N8 64-003 NOZZLE-MONITOR TYPE
NO 64-004 NOZZLE-WATER QUENCH
          MISCELLANEOUS GROUPS (ELEX)
CA OA-
08 08-
          MULTIPLEXER AND/CR DEMULTIPLEXER GROUPS (ELEX)
UC 0C-
          OCEANOGRAPHIC DEVICES (ELEX)
00 00-
          INDICATOR GROUPS (ELEX/ORD)
CD
          INDICATOR GROUPS (FLEX/CRD)
DE DE-
          ANTENNA GROUPS (ELEX)
OF OF-
          ADAPTER GROUPS (FLEX)
         AMPLIFIER GROUPS (ELEX)
DG DG-
OH OH-
          SIMULATOR GROUPS (ELEX)
CI C-
          OSCILLATORS (ELEX)
01 01-
          CONSOLES AND CONSOLE GROUPS (ELEX/CRD)
          CONSCLES AND CONSOLE GROUPS (ELEX/CRC)
CJ
OK
          CONTROL GROUPS (ELEX/ORD)
OK OK-
          CONTROL GROUPS (ELEX/ORD)
OL OL-
          DATA ANALYSIS AND DATA PROCESSING (ELFX)
-MC MO
          MODULATOR AND/CR DEMODULATOR GROUPS (ELEX)
ON ON-
          INTERCONNECTING GROUPS (ELEX)
00
          NOT ASSIGNED
          POWER SUPPLY GROUPS (ELEX/ORD)
CP
OP 0P-
          POWER SUPPLY GROUPS (ELEX/ORD)
-00 00-
          TEST SET GROUPS (ELEX)
          RECFIVER GROUPS (ELEX)
CR OR-
os os-
          OSCILLOSCOPE-TEST (ELEX)
OT OT-
          TRANSMITTER GROUPS (ELEX)
0U 0U-
          CONVERTER GROUPS (ELEX)
OV OV-
          GENERATOR GROUPS (ELEX)
OW CW-
          TERMINAL GROUPS (ELEX)
          CODER. DECODER. INTERROGATOR. TRANSPONDER GROUPS (ELEX)
OX OX-
OY OY-
          RADAR SET GROUPS (ELEX/ORD)
OY
          RADAR SET GROUPS (FLEX/ORD)
OZ OZ-
          RADIO SET GROUPS (ELEX)
          NOT ASSIGNED
CO
O1 99-A01 NR-1 SUBMERSIBLE RESEARCH SHIP
D2 99-AC2 ATS-1, 2, 3 (UNITED KINGDOM)
03 99-A03 ORDNANCE FIRE CONTROL SWITCHING EQUIPMENT (HM&E/ORD)
          ORDNANCE FIRE CONTROL SWITCHING EQUIPMENT (HM&E/ORD)
03
04 99-AC4 DEEP DIVING SUBMERGENCE SYSTEM
C5 59-AC5 OCEANOGRAPHIC COMPONENTS
06
          TRANSCEIVER GRCUPS
          SONAR SET GROUPS
07
OB 97-003 ANTENNA SYSTEM-FLOATING WIRE
09 97-004 ANTENNA SYSTEM-HELICAL. LOOP OR WHIP
PA 50-033 PANEL-REMOTE VALVE OPERATING
PB 88-203 VALVE-MIXING. REFRIGERATION. AIR CONDITIONING AND COOLING
PC 50-0C1 PANEL-FUSE
          PRIME DRIVERS (ELEX)
PD PD-
PE 50-0C5 PANEL-COMMUNICATION
```

```
PF PF -
          FITTINGS-POLE (ELEX)
PG 2G-
          PIGEON ARTICLES (ELEX)
PH PH-
          PHOTOGRAPHIC ARTICLES (ELEX)
PI 97-011 PERISCOPE-STADIMETER
PJ 50-010 PANEL-POWER DISTRIBUTION AND/OR CONTROL (HM&E/ORO)
PJ
          PANEL-POWER DISTRIBUTION AND/OR CONTROL (HM&E/ORD)
PK
          PANEL-INDICATING (HM&E/ORD)
PK 50-025 PANEL-INDICATING (HM&E/ORD)
PL PL-
          PLUG-IN UNITS (ELEX)
PM 41-072 PAPER SHREDDING MACHINE SEE ALSO CFF MACH ACC
PN 25-004 PELORUS STAND SEE ALSO NAVIGATION EQUIPMENT ACC
PO
          NOT ASSIGNED
PP PP-
          POWER SUPPLY-ACAROTATING MACHINE TYPE (ELEX)
PO 97-008 PERISCOPE-COLLIMATOR
PR 97-009 DEPLUMERS. FAIRINGS AND SUPPORTS FOR SUBMARINE PERISCOPES AND MASTS
PS 50-CC9 PANEL-ALARM
PT PT-
          MAPPING AND PLOTTING UNITS (ELEX)
PU PU-
          POWER SUPPLY-POTATING (ELEX)
PV 41-047 CLEANING MACHINE-CLOCK AND WATCH
PW 41-073 PINKING MACHINE
          PIPING SYSTEM HARDWARE
PX 848
PY 41-091 PLANER-METAL CUTTING
PZ 97-010 PERISCOPE-SEXTANT
PO 11-009 POWER SUPPLY-AN/SOS-26 SONAR
PI 28-029 PLOTTING TABLE, MK NC2 MODO.2 & 3 SEE ALSO NAVIG EQ (HM&E/CRD)
          PLOTTING TABLE. MK NC2 MCDO.2 & 3 SEE ALSO NAVIG EQ (HM&E/CRC)
P1
P2 836
          SANITATION EQUIPMENT AND REPAIR PARTS
P3 27-011 PMEUMATIC TUBE SYSTEMS-COMMUNICATION
P4 41-093 POLISHER-METALLURGICAL
P5 41-095 POSITIONER-WELDING
P6 41-094 POT-MELTING. ELEC
P7 97-001 PERISCOPE-SUBMARINE
P8 11-001 POWER SUPPLY-METALLIC RECTIFIER OR SEMICONDUCTOR DIODE TYPE
P9 41-008 CLEANER-STEAM PRESSURE JET
QA 54-C10 PRINTING MACHINE-HEAT DEVELOPING
QB 54-OC5 PRINTING PRESS-OFFSET
QC 54-008 PRINTING PRESS-LETTER PRESS
OD 54-019 PRINTING PRESS-LETTER
OF 54-025 PRINTING PRESS-PROOF
OF 99-028 PROBE AND CARRIER-FUELNG SEE ALSO FUEL CIL SYS ACC
OG 54-017 PROCESSING MACHINE-BLUE PRINT
OH 86-C13 PROCESSING MACHINE-PHOTOGRAPHIC FILM
          NOT ASSIGNED
10
OJ 61-117 PROGRAM CONTROLLER
OK 26-001 PROJECTION EQUIPMENT-MOTION PICTURE
QL 26-002 PROJECTION EQUIPMENT-STILL PICTURE
OM 83-030 PROPELLER ASSEMBLY-CONSTANT PITCH
ON 64-007 RECHARGING UNIT-CO2 PUMPING METHOD
00
          NOT ASSIGNED
OP 89-002 RESCUE CHAMBER AND RECOMPRESSION TANK
00 55-002 REELING MACHINE-HOSE
OR 32-039 REFRIGERATION SYSTEM-ABSORPTION
OS 83-034 PROPELLER ASSEMBLY-CONTROLLABLE PITCH
OT 64-008 PROPORTIONER-FOAM LIO SEE ALSO DAMAGE CONTRL ACC
QU 83-043 PROPULSION DRIVE UNIT-STERN
OV 01-038 PUMP UNIT-PUMP AND ACCESSORIES INSTALLED AS A UNIT
```

```
CW 88-213 VALVE-OVERFLOW
OX C1-O11 PUMP-CENTRIFUGAL . POWER DRIVEN
OY 32-023 REFRIGERATION-MECHANICAL
OZ 42-001 REGULATOR-ELECTRICAL (EXCPT ENGINE GENERATOR)
QO 88-231 VALVE-CROSS
Q1 01-017 PUMP-CENTRIFUGAL. POWER DRIVEN. CLOSE-COUPLED OR COUPLING DESIGN
02 88-245 VALVE-DIRECTIONAL INTERLOCK
Q3 88-248 VALVE-PILOT. PNEUMATIC CPERATED
Q4 01-001 PUMP-CENTRIFUGAL . BOILER FEED
05 88-249 VALVE-CONTROL THERMAL
Q6 41-048 CLEANING MACHINE-ELECTRIC AND DILBURNING
07 88-251 VALVE-LOW PUMP SECTION. SAFETY TRIP
Q8 88-252 VALVE-CENTROL AIR
09 01-014 PUMP-HAND DRIVE. OSCILLATING. RECIPROCATING OR ROTARY
RA 58-007 RACK-REACY SERVICE
RB 52-029 RAM-HYDRAULIC
RC RC-
          REELS (FLEX)
          RECORDER/PEPRCDUCERS (ELEX)
RD RD-
RE RE-
          RELAY ASSEMBLY UNITS (ELEX/ORD)
          RELAY ASSEMBLY UNITS (ELEX/ORD)
RF
RF RF-
          RADIO FREQUENCY COMPONENTS (ELEX)
          CABLES. RF BULK-(ELEX)
RG RG-
RH 16-013 RECONDENSER SYSTER-NITROGEN AND DXYGEN
          COMMISSARY EQUIPMENT
RJ 32-CO7 REFRIGERATION PURGE UNIT
RK 46-010 RECORDEP-PNEUMATIC AND ELECTRO-PNEUMATIC
PL RL-
          REELING MACHINES (ELEX/ORD)
          REELING MACHINES (ELEX/ORD)
PL
RM 41-084 CLEANING MACHINE-TANK
RN 55-0C3 REEL-HOSE.
RO RO-
          RECORDERS (ELFX/CRD)
          RECORDERS (ELEX/CRD)
RO
RP RP-
          REPRODUCERS (FLEX)
RO 32-029 REFIGERATED TANK-FILM PROCESSING
         REFLECTORS-EXCEPT ANTENNA REFLECTORS (ELEX)
RS 32-001 REFRIGERATION SYSTEM-MECHANICAL
RT RT-
          RECEIVER & TRANSMITTER (ELEX)
RU C88
          DAMAGE CONTROL EQUIPMENT AND ACCESSORIES
RV R-
          RECEIVERS (ELEX)
RW 42-002 REGULATOR-ENGINE GENERATOR. BATTERY CHRG. ELECTROMECH
RX 42-007 REGULATOR-ENGINE GENERATOR. BATTERY CHRG. ELEX
RY 42-100 REGULATOR-PRESSURE
RZ 42-101 REGULATOR-FLPW. BOILER FEED WATER
PO 88-253 VALVE-LINEAR DIRECTIONAL CONTROL WITH ACTUATOR
R1 42-102 REGULATOR-FLCW. FLOAT OPERATED. DRAIN/MAKE-UP VLV
R2 42-104 REGULATOR-PRESSURE DXYGEN SERVICE
P3 99-004 RECEPTACLE ASSEMBLY-CO2 ABSORBENT
R4 41-067 GRINDING MACHINE-UTILITY
R5 20-0C3 RESISTOP-VARIABLE
R6 20-004 RESISTOR-FIXED
R7 41-104 REWINDING AND INSULATION MACHINES
R8 20-CC1 RHEDSTAT
R9 88-254 VALVE-REGULATING, COMPRESSED GAS
          SWITCHING UNITS (ELEX)
SA SA-
          SWITCHBOARDS (ELEX)
SB SB-
```

SC 41-112 SANDER-BELT. DISK AND SPINDLE

```
SP 67-008 SANITATION EQUIPMENT SEE ALSO TOILET-MARINE
SE 41-114 SAW-ABRASIVE-DISC. MASONRY
SF 41-115 SAW-BAND
          GENERATOR-SIGNAL (ELEX/ORD)
SG SG-
          GENERATOR-SIGNAL (ELEX/ORD)
          SHELTER (ELEX)
SH S-
SI 54-016 COMPOSING MACHINE-PHOTO PRINTING
SJ 41-120 SAW- POWER HACK
SK 43-017 SAW BAND. MEAT CLTTING
SL 41-078 SAW SETTING MACHINE
          SIMULATORS (ELEX/ORD)
SM
SM SM-
          SIMULATORS (ELEX/ORD)
SN SN-
          SYNCHRONIZERS (ELEX)
SO
          NOT ASSIGNED
SP 83-010 SEAL-SWIVEL JOINT TYPE
SQ 41-145 SFALING MACHINE-HEAT
SR 07-029 HEATER-SPACE. MULTI-FUEL WITH BLOWER
SS 87-006 SELECTOR-SPEED SENSITIVITY
ST ST-
          STRAPS (ELEX)
SU SU-
          OPTICAL UNITS (ELEX)
SV 67-010 SEWAGE TREATMENT SYSTEM-MULTI TOILETS OR URINALS
SW 41-080 SEWING MACHINE-HOUSEHOLD AND INDUSTRIAL
SX 83-017 SHAFT-PRCPULSION. SHIP
SY 41-119 SAW-JIG. WOCD WORKING
SZ 83-002 SEAL-STERN TUBE SHAFT
SO 43-023 SINK-SCULLERY
SI 41-123 SHAPER-METAL CUTTING AND WOODWORKING
S2 41-096 BENDING CR FCLDING MACHINE-MANUAL
S3 99-007 SHELL-MISSILE TURE
S4 85-014 SHOCK ABSORBER-GAS. CIL OR PNEUMATIC
S5 41-081 SHOE FINISHING AND STITCHING MACHINE
56 391
          SHOP FQUIPMENT AND ACCESSORIES ON SHIPS
S7 40-005 SHUTTER
S8 41-125 SIEVE-FCUNDRY
S9 43-052 SIFTING MACHINE-FLOUR. ELECTRIC
          TELEPHONE APPARATUS (ELEX)
TA TA-
          TOWED BCDY (FLEX)
TB T8-
TC TC-
          TOWED CABLE (ELEX)
          TIMING DEVICES (ELEX)
TO TO-
  92-007 TANK-LIQUID STORAGE
TE
TF TF-
          TRANSFORMERS (ELEX)
          POSITIONING DEVICES-TILT AND/OR TRAIN (ELEX)
TG TG-
          TELEGRAPH APPARATUS (ELEX)
TH TH-
TI 61-107 TRANSDUCER-MCTIONAL PICKUP
TJ 88-049 VALVE-MANEUVERING AND THROTTLE
          TOOL KITS (ELEX)
TK TK-
TL TL-
          TOOLS (ELEX)
TM 88-250 VALVE-MANUAL RESET
TN TN-
          TUNING UNITS (ELEX)
          NOT ASSIGNED
TO
TP AN/ A
          INVISIBLE LIGHT. HEAT RADIATION
TO 52-012 TANK-ACCUMULATOR. HYDRAULIC
TR TR-
          TRANSDUCERS (ELEX)
          TEST AND MEASURING EQUIPMENT NOT CTHERWISE CLASSIFIED (ELEX/ORD)
TS
          TEST AND MEASURING EQUIPMENT NOT CTHERWISE CLASSIFIED (ELEX/ORD)
TS TS-
TT TT-
          TELETYPE WRITER AND FACSIMILE APPARATUS (ELEX)
```

```
TU 52-048 COMPENSATOR-HYDRAULIC
          TESTER-TUBE (FLEX)
TV TV-
TW TW-
          TAPE UNITS-USED FOR OPERATIONAL TEST AND CHECK OUT (ELEX)
          TRANSMITTERS-ALL TYPES EXCEPT TELEPHONE (ELEX)
TX T-
TY 31-006 TENSIONING DEVICE-COUNTERWEIGHT
TZ 46-002 TEST EQUIPMENT-ANALYZER
TO 41-149 PUMP-ATRLESS SPRAY PAINT
TI 46-006 TEST FIXTURES. SETS. STANDS AND CALIBRATORS. ALL TYPES
T2 41-150 CLEANER-VACUUM. FLECTRIC
T3 43-029 TOASTER-ELECTRIC. INTERMITTENT
T4 43-030 MIXER AND TANK-FLUID ELECTRIC
TS 43-058 FOOD CUTTER AND MIXER-ELECTRICAL
TO 43-061 COMPACTER-TRASH
TT 46-013 TORSION METER-PROPULSION SHAFTING
TB 48-010 FILTER-AIR. FLECTROSTATIC
          TEST EQUIPMENT-MISCELLANEOUS (HM&E/CRC)
19
T9 41-132 TEST FQUIPMENT-MISCELLANEOUS (HM&E/CRC)
UA U-
          CONNECTORS-AUDIO AND POWER (ELEX)
US C35
          LAUNDRY FOUIPMENT AND ACCESSORIES
UC C22
          STEERING GEAR. EMERGENCY
UD C21
          HYDRAULIC FILTER UNIT. PORTABLE
UE C30
          PORTABLE CLEATS
          INDUSTRIAL GASES GENERATING. HANDLING AND STOWAGE
UF C23
          CONNECTORS-RF (ELEX)
UG UG-
          DIRECTOR-WEAPON SYSTEM
UH
          NOT ASSIGNED
UI
UJ 88-014 VALVE-GATE. HYDRCCARBON FUEL SERVICE
UK 99-018 CABLE ASSEMBLY-ELECTRICAL
UL 99-031 DISPENSER-CHAFF
UM 88-032 VAL'VE-REFRIGERATION SHUT OFF 3/4 IN AND LARGER
UN 52-006 MISSILE HANDLING SYSTEM-HYDRAULIC
UO
          NOT ASSIGNED
UP 41-071 MAGNETIC INSPECTION UNIT PORTABLE
UQ 50-003 PANEL-TEST ELECTRICAL
          CARGO HANDLING ACCESSORIES
UR C27
US 50-006 PANEL-INTERICR COMMUNICATION
UT 50-008 PANEL-GYRO OR CEAD RECKONING CONTROL
UU 86-004 SAFELIGHT-DARKROCM. PHOTOGRAPHIC
UV 28-023 PLOTTING AND TRACING EQUIPMENT
UW 55-0C4 REEL-CABLE
UX 19-002 RELAY-ELECTRICAL SEE ALSO TEST EQUIPMENT
UY 55-OC1 REELING MACHINE-CABLE
UZ 46-003 RECORDER-ELECTRICAL AND ELECTRONIC
UO 41-118 SAW-CIRCULAR
          SHIELD ASSEMBLY-WEAPON SYSTEM
Ul
          TRAIN POWER DRIVE ASSEMBLY-WEAPON SYSTEM
U2
U3
          ELEVATION POWER DRIVE ASSEMBLY-WEAPON SYSTEM
          TRAIN TRANSMISSION ASSEMBLY-WEAPON SYSTEM
114
          ELEVATION TRANSMISSION ASSEMBLY-WEAPON SYSTEM
U5
U6
          TRAIN RECEIVER REGULATOR-WEAPON SYSTEM
U7
          ELEVATION RECEIVER REGULATOR-WEAPON SYSTEM
U8
          CONTROL ASSEMBLY-WEAPON SYSTEM
          FUSE SETTER ASSEMBLY-WEAPON SYSTEM
119
VA 88-103 VALVE-BALANCING
VB 88-149 VALVE-ANGLE
VC 88-039 VALVE-ASTERN
```

```
ENVIRONMENTAL CENTROL SYSTEM SPARES AND REPAIR PARTS
VE 68-CC1 VALVE-BALL
          CONTROL-LAUNCHER
VG 88-038 VALVE-BUTTERFLY
          VEHICLES-CARTS. DOLLIES. VANS U/W ELECTRONIC EQUIPMENT (ELEX)
VH V-
VI 88-057 VALVE-GLOBE
VJ 88-036 VALVE-CHECK
VK 88-175 VALVE-SPECIAL
VL 88-019 VALVE-PILOT AND LINE PRESSURE OPERATEC. DIAPHRAGM AND PISTON TYPES
VM 88-171 VALVE-RELAY AIR. DIAPHRAGM AND PISTCN TYPES
VN 88-026 VALVE-EXPANSION
          NOT ASSIGNED
VO
VP 88-212 VALVE-FLOAT
VO 88-024 VALVE-FUEL DIL REGULATING
VR 88-013 VALVE-GATE. ALL TYPES EXCEPT HYDROCARBON FUEL SERVICE
VS VS-
          SIGNALING EQUIPMENT-VISUAL (ELEX)
VY 88-124 VALVE-LINEAR. DIRECTIONAL CONTROL
VU 88-189 VALVE-INSTANTANECUS HEATER
VV 88-071 VALVE-NEEDLE
VW 88-217 VALVE-PILOT CONTROL. BELLOWS AND SCLENOID OPERATED
VX 88-033 VALVE-PLUG
VY 88-020 VALVE-PRESSURE REGULATING. STEAM SERVICE
VZ 88-025 VALVE-FLUSH
VO 88-102 VALVE-ROTARY. DIRECTIONAL CONTROL
VI 88-176 VALVE-EXHAUST AND RELIEF
V2 88-191 VALVE-FEEDWATER REGULATING
V3 87-C13 VALVE - SEA, UNDERWATER LOG
V4 88-152 VALVE-MAIN BALLAST
V5 88-144 VALVE-MANIFOLD (EXCLUDES VALVE AND TRAP MANIFOLDS)
V6 88-216 VALVE-SCLENCID
V7 88-010 VALVE-TEMPERATURE REGULATING. AUTOMATIC OPERATION
V8 89-166 VALVE-HINGE TYPE
V9 88-055 VALVE-Y
WA 91-001 WASHING MACHINE - LAUNDRY
WB 41-086 WELDING AND BRAZING MACHINE - BAND SAW BLADE
WC 82-002 WELDING MACHINE - RESISTANCE
          CABLE. 2 CONDUCTOR. NON-RF (FLEX)
WD WD-
WE 82-005 WELDING MACH-ARC. ADJUST. CONST VLTG CR CCNST CURR TRANSFORER RECTIFIER
WF WF-
          CABLE. 4 CONDUCTOR. NON-RF (ELEX)
WG 82-001 WELDING SET - TUNGSTEN ARC.INERT GAS SHELDED.NONCONSUMABLE ELECTROCE
WH 82-004 WELDING SET - ARC. INERT GAS SHIELDED. CONSUMABLE ELECTRODE
WI
          NOT ASSIGNED
WJ 82-007 WFLDING SET - STUD. ELECTRIC ARC
WK 62-001 WINCH - HAND CPERATED
WL 62-002 WINCH - STEAM OPERATED
          CABLE. MULTIPLE CONDUCTOR. NON-RF (ELEX)
WY WM-
WN 62-004 WINCH - ELECTRC - HYDRAULIC
WO
          NOT ASSIGNED
WP 62-006 WINCH - ENGINE DRIVEN. GASOLINE OR CIESEL
WO 62-OCT WINCH - PNEUMATIC DRIVE
WR 41-087 WINDING MACHINE COIL
WS WS-
          CABLE. SINGLE CONDUCTOR. NON-RF (ELEX)
          CABLE. 3 CONDUCTOR. NON-RF (ELEX)
WT WT-
WU 63-CO3 WINDLASS - ELECTRICAL MECHANICAL SEE ALSO ANCHOR HANDLING ACCESSORIES
WV 63-004 WINDLASS - HAND CPERATED SEE ALSO ANCHOR HANGLING ACCESSORIES
WW 31-025 WINDOW - CBSERVATION. OPTICAL. PORTLIGHT
```

```
WX 99-001 WINDOW - NON ICING
WY 35-001 WIPER-WINDOW PNEM, RTY OR VERT TYPE, ELEC OR MNL (HM&E/ORD)
          WIPER-WINDOW PNLM. RTY CR VERT TYPE. ELEC OR MNL (HM&E/CRD)
WY
WZ 35-002 WIPER - WINDOW. PENDULUM TYPE. PNEUMATIC
          FIRING CUTOUT ASSY-WEAPON SYSTEM
WO
WI
          CARRIAGE ASSEMBLY-WEAPON SYSTEM
W2
          STAND ASSEMBLY-WEAPON SYSTEM
          SLIDE ASSEMBLY-WEAPON SYSTEM
113
          RAMMER ASSEMBLY-WEAPON SYSTEM
W4
W5
          HOUSING ASSEMBLY-WEAPON SYSTEM
46
          GUN BARPEL ASSEMBLY-WEAPON SYSTEM
W7
          GAS EJECTOR ASSEMBLY-WEAPON SYSTEM
          EMPTY CASE EJECTOR ASSY-WEAPON SYSTEM
W8
W9
          HOIST ASSEMBLY-WEAPON SYSTEM
XA COO
          COMPRESSOR GAS TURBINE REPAIR PARTS
          BULKHEADS-STRUCTURAL
XB
XC
          CANVAS
XD
          DECK COVERINGS
XE E34
          MISCELLANEOUS FLAG ALLOWANCES, MESSING GEAR
XF C36
          SURVIVAL EQUIPMENT
XG C41
          LIFTING AND HANDLING GEAR MAIN AND AUXILIARY MACHINERY
          TOOLS AND ACCESSCRIES MAIN PROPULSION SHAFTING
XH C43
XI C38
          ENVIRONMENTAL CONTROL SYSTEM APPLIANCES
XJ C47
          PUMPS. PCRTABLE
XK C51
          BOILER TOOLS AND ACCESSCRIES
          TOOLS AND ACCESSCRIES DISTILLING PLANT
XI C58
XM C59
          TOOLS AND ACCESSCRIES REFRIGERATION SYSTEM
          DOOR-NON STRUCTURAL
XN
          NOT ASSIGNED
XO
XP C48
          HOSE AND MISCELLANEOUS HOSE FITTINGS
XO C61
          TOOLS AND ACCESSCRIES GENERATORS
XR C18
          RIGGING
          SHEATHING
XS
          TOOLS AND ACCESSCRIES ELECTRIC POWER DISTRIBUTION
XT C62
XU C64
          LIGHT EXTENSION
XV C65
          PORTABLE INTERIOR COMMUNICATION EQUIPMENT
          LIGHT SIGNAL PERTABLE
XW C66
XX C67
          ELECTRICAL AND ELECTRONIC HAND TOOLS
XY C69
          ICIC SUPPORT EQUIPMENT
XZ C70
          FLAGS AND PENNANTS
          ASROC/TORPEDC/MINE HANDLING
X0 C75
X1
          DOME-SONAR(STRUCT AND NON STRUCT)
X2
X3
          BALLAST
          PLATFORM DECK
X4
X5
          FLAT
X6 C77
          NBC WARFARE EQUIPMENT
X7 C81
          MINESWEEPING EQUIPMENT
X8 C83
          AIRCRAFT HANCLING AND STOWAGE
          PROJECTION ECUIPMENT AND ACCESSORIES
X9 C85
YA 54-009 TABLE-LITHOGRAPHIC LAYOUT
YB 60-006 STEERING GEAR
YC 46-C11 TRITIUM AIR MCNITOR
YD 85-C36 TROLLEY - MONCRAIL AND BI-RAIL
          TRUCK/DOLLY/ CRADLE ASSEMBLY SEE ALSC CARGO HNDL ACCY (HM&E/ORD)
YE
YE 85-018 TRUCK/DOLLY/ CRACLE ASSEMBLY SEE ALSC CARGO HNDL ACCY (HM&E/ORD)
```

```
YF 41 .39 TUBE AND FLUE CLEANER - AIR MOTOR CRIVEN
 5 41-140 TUBE AND FLUE CLEANER - ELECTRIC MCTCR DRIVEN
YH 05-001 TURBINE-STEAM. MAIN PROPULSION
YI
          NOT ASSIGNED
YJ 61-029 CONTROL PANEL-AUTOMATIC OR MANUAL
YK 61-048 ELECTRONICS SUB-ASSEMBLIES
YL 82-003 WELDING MACHINE - ARC. DRIVEN BY GAS CR DIESEL INTERNAL COMBUST ENGIN
YM 61-C65 INDUCTOR-VERNIER
YN 82-006 WELDING MACHINE - ARC. ELECTRIC MOTOR DRIVEN
YO
          NOT ASSIGNED
YP 62-003 WINCH - ELECTRIC
YO 63-001 WINDLASS - STEAM DRIVEN SEE ALSO ANCHOR HANDLING ACCESSORIES
YR 05-006 TURBINE-STEAM. AUXILIARY
YS C5-022 TURBINE - WATER CRIVEN
YT 05-028 TURBINE - GAS. PROPULSION AND AUXILIARY SERVICE OVER 2000 HORSEPOWER
YU 05-029 TURBINE - GAS. PROPULSION AND AUX SERV 2000 HORSEPOWER OR UNDER
YV 05-025 TURBINE AND FAN. INTEGRAL FORCED DRAFT AIR SERVICE FOR MAIN BCILER
YW C5-019 TURBINE CONTROL - PROPULSION
YX 05-024 TURBO/SUPERCHARGER - DIESEL ENGINE
YY 85-003 TURNTABLE - TROLLEY OR BALL TYPE. MANUAL OR POWER DRIVEN
YZ 85-009 TORPEDO HANDLING UNIT (HMEE/ORD)
          TORPEDO HANDLING UNIT (HM&E/ORD)
YZ
          HULL FITTINGS. LASHING GEAR AND ACCESS CLOSURES
YO C12
Y1 53-002 CAPSTAN-POWER OPERATED. ELECTRIC OR HYDRAULIC
Y2 63-002 WINDLASS - ELECTFIC HYDRAULIC SEE ALSO ANCHOR HANDLING ACCESSORIES
          TEST. MEASURING AND INDICATING EQUIPMENT
Y3 C87
Y4 C90
          RADIATION MONITORING AND COUNTERMEASURES
          SHIPBOARD FIREFIGHTING AND ACCESSORIES
Y5 C93
          ORDNANCE TOOLS AND ACCESSORIES (AEL/CPD)
ORDNANCE TOOLS AND ACCESSORIES (AEL/CRD)
Y6
Y6 A00
Y7
          WELDMENT
Y8 C94
          SALVAGE TOOLS AND EQUIPMENT
Y9 C95
          DIVING EQUIPMENT
ZA 61-086 STAND. CCNTRCL-STEERING
ZB 61-087 STAND. CENTREL PROPULSION
ZC 91-009 STARCH CCCKER-LAUNDRY
ZD 61-482 VALVE OPERATOR-HYDRAULIC OPERATOR
ZE 34-001 STARTER-ENGINE. ELECTRICAL ZF 34-002 STARTER-ENGINE. HYDRAULIC
ZG 34-0C3 STARTER-ENGINE. CIRECT COMBUSTION AND/OR GAS TURBINE
ZH 34-005 STARTER-ENGINE.AIR MOTOR OR AIR TURBINE TYPE
          NOT ASSIGNED
ZI
ZJ 60-001 STEERING GEAR-ELECTRO-HYDRAULIC. MARINE. LINK. TILLER TY P
ZK 60-003 STRNG GEAR-ELEC MCH. MRN. DRM&CBL/CBL&CC. GR&OC. HND OP TY
ZL 60-007 STEERING GEAR-ELECTRIC. STEER MOTOR-CHAIN DRIVE TYPE
          IMPEDANCE MEASURING DEVICES (ELEX)
ZM ZM-
ZN 60-008 STEERING GEAR-EMERGENCY SUBMERSIBLE TYPE
ZO
          NOT ASSIGNED
ZP 61-027 STEERING HEAC-GYROPILCT
ZO 54-020 STITCHEP-BCCK AND PAMPHLET
ZR 64-005 STRAINER-PRESSURE.FIRE HOSE WITH BALL VALVE
ZS 64-014 FIRE EXTINGUISHING SYSTEM-TWIN AGENT
          TOOLS AND EQUIPMENT MISCELLANEOUS
ZT C99
ZU 64-015 FIRE EXTINGUISHING UNIT-DRY CHEMICAL
          DSRV RESCUE CENTROL CENTER
ZV 039
ZW 64-016 NOZZLE ASSEMBLY-TWIN AGENT
```

```
ZX 41-113 SAND MULLER
ZY 75-001 STRAINER-SEDIMENT
          MISCELLANFOUS ITEMS NOT CTHERWISE CCCE.
27
20 E24
          MISCELLANFOUS FLAG ALLOWANCES. NAVIGATION INSTRUMENTS
ZI 61-072 CONTROL -HUMICITY
22 41-129 SURFACER-WCODWORKING
23 85-027 SWAY BRACE ASSEMBLY-ELECTRIC CHAIN HOIST DRIVE
Z4 89-0C5 SWIMMERS RECEVERY SYSTEM
25 E36
          MISCELLANEOUS FLAG ALLCWANCES. VACUUM CLEANER
Z6 61-074 COMPUTER-SHIPBCARD
Z7 E85
          MISCELLANEOUS FLAG ALLOWANCES. PROJECTION EQUIPMENT
28 61-389 BELLOWS ASSEMBLY-PRESSURE RELIEF
19
          NOT ASSIGNED
          NOT ASSIGNED
CA
03
          NOT ASSIGNED
OC
          TELEMETERING SETS
          NOT ASSIGNED
00
OF
          NOT ASSIGNED
OF
          NOT ASSIGNED
          NOT ASSIGNED
OG
          NOT ASSIGNED
OH
          NOT ASSIGNED
10
OJ
          NOT ASSIGNED
OK
          NOT ASSIGNED
          NOT ASSIGNED
OL
          NOT ASSIGNED
MO
          NOT ASSIGNED
ON
00
          NOT ASSIGNED
OP
          NOT ASSIGNED
CO
          NOT ASSIGNED
OR OR
          OPDALTS AND CRONANCE MODIFICATIONS-CTHER THAN SWITCHBOARD
OS RS
          DRDALTS AND GRONANCE MODIFICATIONS-SWITCHBOARD ONLY
OT
          NOT ASSIGNED
00
          NOT ASSIGNED
          NOT ASSIGNED
OV
          NOT ASSIGNED
OW
OX
          NOT ASSIGNED
GY
          NOT ASSIGNED
          NOT ASSIGNED
OO NLAPLW NLAPLW-ITEM LISTED BY SPCC AS NOT LAPL WORTHY
OO INCOMP INCOMP-ITEM LISTED BY SPCC AS INCOMPLETE
01 06-001 COMPRESSOR-RECIPROCATING. OTHER
02 06-CC4 COMPRESSOR-CENTRIFUGAL. REFRIGERATION
03 06-201 COMPRESSOR-RECIPROCATING. AIR. HIGH. PRESSURE
04 06-202 COMPRESSOR-RECIPROCATING, AIR, LOW, PRESSURE
05 06-2C3 COMPRESSOR-CENTRIFUGAL. AIR. LOW PRESSURE
06 C6-2C4 COMPRESSCR-RCTARY. AIP. LOW PRESSURE
07 C6-5C1 COMPRESSOR-VAPOR ROTARY
          AVIATION ORDNANCE EQUIPMENT
08
09 04-001 CONDENSER-REFRIGERATION. WATER. COOLED
          NOT ASSIGNED
18 41-CO4 BOOTH-SPRAYING
1C 39-005 CLUTCH-FRICTICN
          PROPANE GAS AND CYLINDERS
10 837
          MACK
15
1F 14-007 FUSE UNIT ASS
```

```
16 41-045 GRINDING MACHINE-UTILITY (INCL BUFFNG CAPABILITY)
1H 16-006 HYPOCHL CRINATION UNIT
11
          NOT ASSIGNED
1J 01-012 PUMP-FUEL. ALL TYPES INCLUDING ELECTRIC DRIVE DESIGN
1K 54-001 PUNCHING MACHINE-PAPER
IL 61-049 SYNCHRO-RECEIVER. TRANSMITTER. RECEIVER. TRANSMITTER
1M 17-018 MOTOR-ACIDE MAIN PROP. UNLIMITED HERSEPEWER
IN C32
          FURNISHINGS AND CUTFITTINGS
10
          NOT ASSIGNED
1P 39-003 POWER TAKE CFF-ACCESSORY DRIVE
10 01-005 PUMP-POTARY. POWER DRIVEN
IR 43-057 RINSER-SANITIZER
15 86-GC1 SINK-PHOTOGRAPHIC PROCESSING
1T 01-013 PUMPING UNIT-CENTRIFUGAL. POWER DRIVEN. AIRCRAFT FUELING
10
          NOT ASSIGNED
IV 88-004 VALVE-SAFETY RELIEF. MAIN PROPULSION BOILER
lW
          NOT ASSIGNED
1X 52-014 CYLINDER-ACTUATING LINEAR SEE ALSO JACK ASSEMBLY/SHCK AB
IY 57-008 CRANE-ASROC MISSILE
          NOT ASSIGNED
12
          NOT ASSIGNED
10
11 C4-1CO CONDENSER-STEAM. ALL TYPES
12 01-003 PUMP-CENTRIFUGAL . MAIN CONDENSER CIRCU TING
13 01-004 PUMP-ROTARY. POWER DRIVEN. CAM AND PLUNGER DESIGN
14 C1-006 PUMP-ROTARY, POWER DRIVEN, IMPELLER CESIGN WITH TIMING GEARS
15 01-007 PUMP-POTARY. POWER DRIVEN. EXTERNAL GEAR DESIGN
16 32-009 CONDENSING UNIT-REFRIGERATION
17 99-023 CONNECTOR-ELECTRICAL SEE BOX-ELECTRICAL
18 61-030 CONSOLE-CONTROL AND POWER
19 C9-004 CONTROL-BATTERY CHARGER
          LAUNCHING SYSTEM (MISSILE/ROCKET)
          BOX-ELECTRICAL (HMGE/ORD)
28
28 99-008 BOX-FLECTRICAL (HM&E/CRD)
2C 39-006 CLUTCH-MAGNETIC
20 844
          PROPELLER. SPECIAL TOOLS AND HANDLING GEAR
2.E
          LAUNCHERS (MISSILE/RCCKET)
2F B50
          GOVERNOR OVERSPEED SPARES
2G 25-024 GYRO COMPASS-ARMA MK 7.8.9.10.21.22.24. & 26
2H 31-003 HATCH COVER
          NOT ASSIGNED
21
2J
          ANTI-ICING SYSTEM
2K 41-074 PUNCHING. SHEARING. AND NIBBLING MACHINE-METAL
2L 32-034 SEPARATOR-DIL. REFRIGERANT
2M 41-C89 MOTOR-PNEUMATIC
24 83-037 OIL DISTRIBUTION BOX OR OIL INJECTOR ASSEMBLY
20
          NOT ASSIGNED
2P 52-047 POWER UNIT-HYDRAULIC
20 39-001 CLUTCH-POSITIVE CRIVE AND ROTATING ELEMENT
2R 41-075 RIVETING MACHINE-ELECTRIC OR PNEUMATIC
25 41-082 SKIVING AND BEVELING MACHINF-SHOE. SOLE. HAND OPERATED
2T 41-085 THREADING MACHINE-PIPE AND BOLT SEE ALSC SHOP ACCESSORIES-TOOLS X ECP
20
          MAGAZINES-WEAPON SYSTEM
24
          GUN MOUNTS
2W
          NOT ASSIGNED
2X
          CASTING
2Y 57-009 CRANE-ELECTRC HYDRAULIC
```

```
22 21-011 SWITCH-FLOAT. LICUID LEVEL. FLOW DETECTING
20 61-008 CONTROL-STEERING SYSTEM
21 61-009 CONTROL-MECHANICAL
         NOT ASSIGNED
22
23 61-015 CONTROL-NAVIGATIONAL LIGHT
24 61-022 CONTROL-ACQUISTIC DEVICE
25 61-024 CONTROL-MECHANICAL PUSH PULL STROKE
26 61-026 CONTROL-ELECTRIC LIGHT
27 61-040 CONTROL-VALVE CPERATOR
28 61-064 CONTROL-HUMICITY
29 61-067 CONTROL-REMOTE TRANSMITTERS AND RECEIVERS
         NOT ASSIGNED
38 80-001 BRAKE-ELECTRIC. SHOE OR DISC. SOLENDID
3C 39-007 CLUTCH-MAGNETIC PARTICLE
3D B41
          PROPULSION MAIN CRIVE CIESEL ENGINE ECUIPMENT AND ACCESSORIES
35
          NOT ASSIGNED
3F
          FRAME-STRUCTURAL
3G 25-028 GYRO COMPASS-SPERRY MK 11. 14. 17. 18. & 19
3H
          NOT ASSIGNED
          NOT ASSIGNED
31
3J 21-018 SWITCHING UNIT-POWER TRANSFER
3K 76-001 PURIFIER-CENTRIFUGAL
3L 93-009 SEPAPATER MEISTURE
34 52-046 MOTOR-HYDRAULIC
3N 01-018 PUMP-CENTRIFUGAL, SINGLE STAGE, CLOSE-CCUPLED, NAVY STD
         NOT ASSIGNED
3P 61-091 POWER UNIT-GYRC PILOT
30 01-009 PUMP-ROTARY. POWER DRIVEN. VANE DESIGN. FIXED CR VAR DELIVERY
3R 87-002 RODMETER-UNDERWATER LCG SYSTEM
35 32-020 SODA FOUNTAIN
3T 61-056 THRUSTOR-MOTOR CRIVEN. HYDRAULICALLY CPERATED
3U 858
         DISTILLING PLANT ACCESSORIES
3V 16-016 VAPORIZER SYSTEM - LIQUID DXYGEN OR NITRCGEN
3W AN/ C CARRIER
3X C6-OC5 COMPRESSOR-RECIPROCATING. REFRIG. VERT OPR.SEMI-HERM
3Y 57-010 CRANE STERN
3Z AN/ D RADIAC
30 61-071 CONTROL-PHOTOELECTRIC CELL
31 61-079 CONTROL-CONSTANT FREQUENCY
32 61-096 CONTPOL-TRANSMISSION REVERSING MECHANISM
33 61-108 CONTROL-PERISCOPE
34 61-110 CONTROL-SENSOR. CEPTH AND TRIM
35 61-402 CONTROL-FLAME FAILURE
36 61-444 CONTROL-GENERATOR. COOLER FEEDWATER
37 61-481 CONTROL-SERVC. CONTROLLABLE PITCH PROPELLERS
38 87-0C4 CONTROL-UNDERWATER LOG
39 61-019 CONTROL TRANSMITTER-PRESSURE DIFFERENTIAL
44 ANY G TELEGRAPH OR TELETYPE
          BULKHEAD-NONSTRUCTURAL
4C 39-013 CLUTCH- ALL CTHER TYPES
4D 31-C19 DOOR-MISSLE TUBE
4E AN/ I INTERPHONE AND PUBLIC ADDRESS
4F
          FORGING
4G 25-039 GYRO COMPASS-SPERRY MK 23 AND 27
4H AN/ J ELECTROMECHANICAL CR INERTIAL WIRE COVERED
         NOT ASSIGNED
```

```
41 22-001 SWITCHBOARD-DEGAUSSING
4K 61-012 CONTROL-DEGAUSSING
4L 61-011 SERVE GEAR TRAIN
44 18-001 MOTOR GENERATOR
4N 31-002 OPERATING MECHANISM-DOCK.RAMP.STERNGATE & BRIDGE
40
          NOT ASSIGNED
4P 41-069 PRESS-GROMMET AND EYFLET
          TELEMFTERING (FLEX/ORD)
40
40 AN/ K TELEMFTFRING (ELEX/ORD)
4R 31-018 RUDDER-INCLUDING STOCKS. POSTS AND CARRIERS
45 41-127 SOLDER AND DESCLOER UNIT-ELECTRIC
4T 61-005 TIMER
4U AN/ L COUNTER MEASURES
4V 43-014 VEGETABLE PEELING MACHINE - ELECTRIC
4W AN/ M METECROLOGICAL
4X C33
          CLOTHING STANDARD OUTFIT, AIR PURIFICATION AND LIFE PRESERVERS
4Y 57-011 CRANF-HEAVY EQUIPMENT
4Z 01-019 PUMP CENTRIFUGAL. POWER DRIVEN. PERIPHERAL CESIGN
40 61-075 CONTROL-STEERING AND DIVING ASSEMBLY
41 61-062 CONTROL-PNEUMATIC
42 61-066 CONTROL-TELEMOTOR STEERING
43 61-089 CONTROL-SPLIT PLANE
44 61-132 CONTROL-FEED WATER SYSTEM
45 61-251 CONTROL- PRESSURE. TEMP. LEVEL AND FLOW
46 83-040 CONTROLL-CONTROLLABLE PITCH PROPELLER
47 15-002 CONTROLLER/STARTER. AC
48 AN/ N SOUND IN AIR
49 AN/ P
         RADAR
54 AN/ O SONAR AND UNDERWATER SCUND
58 80-002 BRAKE-ELECTRIC. MOTOR CPERATED
5C 43-015 COFFEE MAKER
50 31-017 DOOR-HINGED TYPE, POWER OPERATED
SE AN/ R RADIO
          FOUNDATION
5F
5G 25-008 GYRO COMPASS EQUIPMENT-AMPLIFIER-SYNCHRO SIGNAL
5H ANY S SPECIAL TYPES MAGNETIC. ETC.. CR CCMBINATIONS OF TYPES
          NOT ASSIGNED
5J 22-002 SWITCHBOARD-INTERIOR COMMUNICATION
          PLATFOR M-SERVICE
5K
          STRUCTURE-DECKHOUSE
5L
5M AN/ T TELEPHONE (WIPE)
5N 28-009 OPTICAL NAVIGATIONAL AIDS ALSO SEE SPECIFIC EOPMT
          NOT ASSIGNED
50
5P 41-098 PRESS-HYDRAULIC. MANUAL CR POWER CPERATED
50 01-008 PUMP-ROTARY. POWER DRIVEN. INTERNAL GEAR DESIGN
          HYDRAULIC SYSTEM TOOLS AND REPAIR PARTS
5R 821
55 41-126 SOLDERING AND BRAZING OUTFIT. ELECTRIC
          TRUNK-STRUCTURAL
SU ANY V VISUAL AND VISIBLE LIGHT
5V 87-007 VENT, AIR - U/W LOG EQUIPMENT
5W ANY W ARMAMENT (PECULIAR TO ARMAMENT. NOT CTHERWISE COVERED)
5x 01-021 PUMP-CENTRIFUGAL. TURBINE DRIVEN. GASCLINE SERVICE
SY 57-013 CRANF-GANTRY
5Z 862
          PORTABLE STORAGE BATTERIES AND POWER DISTRIBUTION ACCESSORIES
          FACSIMILE OR TELEVISION
50 AN/ X
51 AN/ Y DATA PROCESSING
```

```
CDC LAPL
            AUTOMOTIVE & CONSTRUCTION EQUIPMENT (INCL ALL COMMODITY CLASS 95)
  52
            MISC. PARTS LISTS FOR SHIPS (INCL ALL APLS STARTING WITH 89000)
  53
            MAINTENANCE & REPAIR SHIP EQUIPMENT (INCL ALL COMMODITY CLASS 12)
  54
            CHEMICAL WARFARE EQUIPMENT (INCL ALL COMMODITY CLASS 47)
  55
  56
            SICK-BAY EQUIPMENT (INCL ALL COMMCDITY CLASS 84)
  57 01-020 PUMP-CENTRIFUGAL. POWER DRIVEN. HCRIZCHTAL. SPLIT CASE DESIGN
  58
            RIGGING & RIGGING GEAR (INCL ALL CCMMCDITY CLASS 90)
            CONSTRUCTION EQUIPMENT (INCL ALL COMMODITY CLASS 96)
  59
  6A 99-015 ARRESTOR-ELECTRICAL
  68 01-028 PUMP-CENTRIFUGAL. TURBINE DRIVEN. HCRIZCNTAL. CLOSE-COUPLED
  6C 54-023 COLLATOR
  60 31-008 DOOR-METAL SLIDING
            SPECIAL POWER PLANT EQUIPMENT (INCL ALL COMMODITY CLASS 98)
  6F
  6F
            NOT ASSIGNED
  6G 25-010 GYRO COMPASS EQUIPMENT-ALARMS-AUDIBLE & VISIBLE
  6H
            NOT ASSIGNED
            NOT ASSIGNED
  61
  6J 22-004 SWITCHBOARD-PRCPULSION
  5K
            PYROTECHNIC EQUIPMENT
  61
            SEA CHEST
  6M E99
            MISCELLANEOUS FLAS ALLOWANCES. FURNITURE AND MISC. EQUIPMENT
  6N 87-012 OSCILLATOR AND AMPLIFIER-U/W LOG ECUIPMENT
            NOT ASSIGNED
  6P 41-100 PRESS-ARBOR. MANUAL OPERATION
  60
            NOT ASSIGNED
  60
            NOT ASSIGNED
  65 61-046 SOLENOID-ELECTRIC
  6T 43-026 TOASTER-ELECTRIC
            NOT ASSIGNED
  6V 31-020 VENTILATER - DECK
  6W
            NOT ASSIGNED
  6X B16
            ACCESS CLOSURES CPERATING SPARES
  6Y 57-016 CRANE-KINGPOST
            NOT ASSIGNED
  60 15-010 CONTROLLER, DC
  61
            NOT ASSIGNED
  62 25-014 CONVERTER-SIGNAL DATA
  63 01-022 PUMP-CENTRIFUGAL. POWER DRIVEN. FCR CCMMERCIAL DISHWASHING MACHINE
  64 01-023 PUMP-CENTRIFUGAL . POWER DRIVEN, SUBMARINE TRIM AND DRAIN SERVICE
  65 59-006 CONVEYOR-POWER OPERATED. BELT OR VERTICAL TRAY TYPE
            NOT ASSIGNED
  67 03-001 COOLER-FLUID. SHELL/TUBE CONSTRUCTION
  68 01-026 PUMPING UNIT-CENTRIFUGAL. ELECTRIC MCTOR DRIVEN. FOR STEAM SYSTEMS
  69 03-002 COOLER-FLUID. TYPE B
  74
            APPENDAGES-SHELL
  78 80-003 BRAKE-PNEUMATIC
  7C 41-009 COLLECTOR UNIT-DUST
  7D 43-C54 DOUGH INTERMEDIATE PROOFING MACHINES
  7F
            NOT ASSIGNED
  75
            NOT ASSIGNED
  7G 25-011 GYRO COMPASS EQUIPMENT-CABINET-GYRO & GUID CCMP STOR
  7H
            NOT ASSIGNED
            NOT ASSIGNED
  71
  7J 22-009 SWITCHBCARD-ALARM
            NOT ASSIGNED
  7K
  7L
            STANCHIONS
```

```
7M 51-UC6 MUUNT-RESILIENT
TN 41-090 OVEN-THERMAL DRYING. ELECTRIC
          NOT ASSIGNED
7P 44-008 PRESSURE REDUCING STATION
70
          NOT ASSIGNED
          NOT ASSIGNED
7R
75 81-001 SOOT BLOWERS
7 T
          TORPEDO TUBE ASSEMBLY
          NOT ASSIGNED
71
7V 61-054 VFRTICAL REFERENCE
7W
          NOT ASSIGNED
7 X
          NOT ASSIGNED
7Y 41-039 CUT-OFF MACHINE-ABRASIVE DISK. METAL CUTTING
72 21-023 SWITCH-PRESSURE AND/CR THERMOSTATIC
70 03-003 COOLER-FLUID. ENGINE JACKET WATER HULL MCUNTED
71 03-004 COOLER. FLD SMPL WTR TYPE I SHL/CL DSA. TYP II DB TB
72 C3-006 COOLER, AIR
73 03-011 COOLER-FLUID. RADIATOR ENGINE COOLANT
74 03-015 COOLER-AMINE
75 32-011 COOLER-AIR FLCK UNIT
76 32-010 COOLING COIL-AIR. DUCT TYPE AND GRAVITY TYPE
77 46-005 COUNTERS AND TOTALIZERS
78
          NOT ASSIGNED
79 51-001 COUPLING-FLEXIBLE. SCUND ISOLATION
          NOT ASSIGNED
88 80-004 EPAKE-MANUAL
8C 28-012 CCMPASS COMPENSATING EQUIPMENT
80 43-018 DOUGH MIXING MACHINES
          NOT ASSIGNED
8F
          NOT ASSIGNED
8G 25-021 GYRO CCMPASS EQUIPMENT-RELAY TRANSMITTER
8H
          NOT ASSIGNED
          NOT ASSIGNED
18
8J 22-013 SWITCHBCARD-POWER
          NOT ASSIGNED
8K
8L B78
          AMMUNITION HANDLING AND STOWAGE
8M 86-014 MOUNT-FILM SLIDE . PHOTOGRAPHIC
8N 43-019 RANGES AND OVENS-OIL BURNING-SEE ALSC GALLEY EOPMT
80
          NOT ASSIGNED
8P 29-003 PRIMER-ENGINE STARTING, ETHER INJECTION
80 01-002 PUMP-RECIPROCATING. DIRECT ACTING AND POWER DRIVEN
          NOT ASSIGNED
85 25-017 STABILIZER-GYRC
8T 67-009 TOILET-MARINE
          NOT ASSIGNED
8V 26-004 VIEWER - STILL PICTURE
          NOT ASSIGNED
8W
8 X
          NOT ASSIGNED
8Y 02-004 BOILER-AUXILIARY. HP STEAM. DIL FIRED
8Z 21-0C6 SWITCHES-GENERAL
80 01-032 PUMP UNIT-CENTRIFUGAL. POWER DRIVEN. PORTABLE (SELF-CONTAINED)
81 78-OC1 CCUPLING-FLEXIBLE. SHAFT
82 01-034 PUMPING UNIT-HYDRAULIC. AIR DRIVEN
          NOT ASSIGNED
83
84 01-035 PUMP-CENTRIFUGAL. PWR DRIVEN. (MULTI-STAGE) VERT DEEPWELL TURB DESIGN
85 01-036 PUMP-JET. MAIN PROPULSION
```

```
86 01-037 PUMP-RECIPROCATING. AIR DRIVEN. MISCELLANEOUS SERVICE
87 78-004 COUPLING-FLEX. SHFT. AUXILIARY SERVICE
88 02-002 BOILER-AUXILIARY. HP STEAM. WATER TUBE
89 02-003 BOILER-AUXILIARY. HP STEAM. HORIZONTAL FIRE TUBE
          NOT ASSIGNED
98 80-0C5 BRAKE-HYDRAULIC
          COMPARTMENT
90 43-032 DOUGH PRCCESSING MACHINE-POWER AND MANUAL
          NOT ASSIGNED
9F
          NOT ASSIGNED
9G 41-066 GRINDING MACHINE-TOOLS & CUTTERS
          NOT ASSIGNED
          NOT ASSIGNED
91
9J 22-021 SWITCHBOARD-STATIC GROUP CONTROL
9K
          NOT ASSIGNED
9L
          SMALL ARMS
SM 79-001 MUFFLER
91
          GRATINGS. FLCCR PLATES
90
          NOT ASSIGNED
9P 86-002 PRINTER-PHOTOGRAPHIC
          NOT ASSIGNED
          NOT ASSIGNED
98
9S 31-029 STABILIZER-ACTIV FIN. RETRCTBLE & NCNRETRCTBLE
9T C25
          TOWING GEAR
          NOT ASSIGNED
9V 86-006 VIEWER PRINTER - MICROFILM
911
          NOT ASSIGNED
9 X
          NOT ASSIGNED
9Y 54-013 CUTTER-PAPER. GUILLOTINE
          NOT ASSIGNED
90
          NOT ASSIGNED
          WINCHES AND CAPSTANS REPAIR PARTS
91 820
92 78-011 COUPLING-RIGID. SHAFT
93 78-009 COUPLING-HYDPAULIC
94 78-012 COUPLING-CLAMP PIPE
95 78-013 COUPLING-ELECTRIC INDUCTION
96 93-018 COUPLING-HOSE . MISC SEE ALSO UNDWAY REPLEN ACC
97 57-OC1 CRANE-BRIDGE CR CVERHEAD TRAVELING
98 57-002 CRANE-QUARTER
99 57-0C3 CRANE-JIB
```